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BRIDGING 'ISLANDS OF MEDICINE':
BALANCING MEDICAL PLURALITY ON LA ISLA DE CHILOÉ

by

Dolores Marie LeVangie

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Abstract

This thesis brings together the study of islands, anthropology, and post-colonialism; it discusses (1) how global assemblages, such as colonial interactions and neoliberal economies influence individual well-being and local health care ontologies as practice on islands, and (2) the space and place of medical plurality on islands. Ethnographic research took place over four months on Chiloé Island, Chile. The research included interviews with members of the Williche Council of Chief's health program, medical practitioners in the public health system, and health service employees with the government. An examination of the integration between the Council's health program and public health care clinics in the archipelago is central to this thesis. This intercultural approach to health care is compared to that of the institutionalization of indigenous medicines within the South Pacific. The relationship among health, economies, and ecosystems on islands, serves as a framework for gaining a different perspective on how medical pluralism occurs on islands.

Key Words: Anthropology, Biomedicine, Chiloé Island, Healthy Islands, Indigenous Medicine, Intercultural Health, Neoliberalism, Post-colonialism, World Health Organization

Preface

In 2007 I spent five months in the Chiloé Archipelago, Chile, as an "Indigenous Economic Development Intern." The Institute of Island Studies, UPEI, sent me to learn how Williche people use seaweed for food and medicine. This southern archipelago, part of the Los Lagos region is comprised of the grand island of Chiloé and roughly thirty smaller islands, most of which are homes to farming and fishing families. The main island of Chiloé (189 km long and 56–64 wide) is the second-largest island in South America. There are no bridges to connect any of the smaller islands to the grand island, nor one connecting to mainland Chile. Rural conditions across the archipelago are very similar: accessing them is time-consuming using small ferries; roads are often non-existent or unsuitable for motor vehicles; homes may have limited running water, and usually powered by generators. Urban life in Chiloé exists in one of the island's three larger towns or one of the numerous smaller townships. From my experience, life in the archipelago can be complex marked by conflict and community, with a sense of tranquillity and turbulence, and frequently controlled by inclement weather.

The archipelago is well known in Chile and Argentina for its beauty, coastal temperate rainforests, cultural practices such as dances, music, food and magical folklore, as well as its natural resources of timber, fish, shellfish, sea plants, and wild potatoes. Found in the tenth region of Chile, Chiloé is far from the centre in Santiago (a 17hr bus and ferry trip) and often viewed as another world by mainlanders and islanders. Words and phrases such as unique character, verdant island, solidarity, territorial attachment, hardiness, and self-sufficiency are juxtaposed with those of solitude, backwardness,

isolation, fragile society, remoteness, separated, and exile; these words can all be used to describe the archipelago and in this case are within one article (Rohter 2006).

The people of Chiloé consist of both the Williche population and Chilotes—a mix of indigenous and Spanish ethnicity; these two groups are more alike than they are different. The identity of being Williche is closely tied to connections with the land and the sea; the name *Williche* means people of the south. Many of the daily practices that comprise Chilote culture are a blend of both Williche and Chilote traditions. Indeed, there are many non-Williche Chilotes who also have a passion for living off of the land. I was told at one point that a large portion of the population has Williche ancestry, but only a fraction identified as being indigenous. This makes it very difficult to find an official number of Williche in Chiloé. Before Williches arrived on the island, it was inhabited by Chonos, a group believed either to be extinct (García et al. 2006:473), or with a small population living on one of smaller islands. Some Williche customs, such as cooking shellfish, meats and potatoes in the ground (*curanto*), were learned from the Chonos.

Williche communities can be found outside of the Chiloé archipelago in the Lakes Region, River Region, and in Argentina. There is debate on the relationship between Williche and Mapuche peoples. Some suggest they comprise one group or nation, while others state they are separate. The reason I want to address this is because some Williche I spoke with, in the Chiloé archipelago, strongly refuse the identity of Mapuche, they did not want to be considered part of the Mapuche tribe. They are Williche, their own group—not Mapuche. However, it seems that the state groups Williche people under a wider Mapuche umbrella. This is an area that was difficult to understand, but I think it is comparable to the structure of First Nations language families in Canada. For example,

Mi'kmaq fall under Eastern Algonquin languages, which is a subgroup of the larger Algonquin language family. However, the Algonquin tribe is found in Ontario and Quebec while Mi'kmaq are in Atlantic Canada and Maine. Today they are two distinct tribes but related through their languages and history. Both the Mapuche and Williche speak a version of Mapudungun, which falls under the Mapuche language family. Both groups can be considered their own tribe, while being related through the language family and historically.

As an intern, I worked under the supervision of Manuel Muñoz Millalonco, an anthropologist, professor and member of the General Council of the Williche Chiefs of Chiloé. The Williche Council of Chiefs (WCC) is an active, indigenous tribal council that focuses on the health, education, culture, and land rights of their people. It was the Council's centre, *Mapu Ñuke* [Mother Earth], where I learned of the Council's health program, *Küme Mogen Rüpü* [a path to balance]. Both of these phrases are in the Williche language, Mapudungun, which is spoken mostly in Williche rural communities.

I was invited to return to Chiloé by the Grand Chief of the Williche, Don Armando Llaitureo Manquemilla, to do fieldwork for my master's degree in 2010 (see Appendix A). The Council suggested that I focus my data collection on the work of their health team, and the experience of the integration that was occurring between this team and various family health clinics in the archipelago in 2010. By taking direction from the Council, their needs were not only considered but also acted upon. From an ethical perspective, research within First Nations communities should not occur unless there is an invitation from the community, the community supports it and there is co-creation of the study by the community and researcher.

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I am grateful for the welcoming nature of the Williche Council of Chiefs of Chiloé and their support. This research would not have taken place without their partnership. To Don Armando Llaitureo Manquemilla, Grand Chief of the Williche of Chiloé, I am especially thankful. As well, Manuel Muñoz Millalonco played an instrumental role in my return to Chiloé, and supervised my time in the archipelago. His keen insight into intercultural health shaped my ethnographic experience. To those I interviewed I owe a special acknowledgement, this thesis could not have been what it is without their contributions. For their time, conversations and knowledge I am deeply indebted. The entire staff of Mapu Ñuke and its health team provided me with a home away from home, many laughs and cups of tea.

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List of Abbreviations

CESFAM	*Centros de Salud Familar* [Family Health Centre]
CHP	Council's Health Program
CHT	Council's Health Team
HGDP	Human Genome Diversity Project
HGP	Human Genome Project
IHT	Indigenous Health Technologies
ICHCP	Intercultural Complementary Health Care Program
ISA	Infectious Salmon Anaemia
KMR	*Küme Mogen Rüpü*
NIH	National Institute of Health
NCD	Noncommunicable Diseases
TRM	Traditional Medicine
WCC	Williche Council of Chiefs
WHO	World Health Organization

The somewhat glamorous picture of tropical paradise which is presented through a travel agency on a cold winter's day, whilst visually accurate, masks the many health, social, economic and environmental problems which are faced by Pacific island countries.

—Donald Nutbeam (1996:263)

Don't be so blind looking at the physical body.
Don't forget there is a spirit in it, there's a soul in it. Even the stone has a soul in it.

–© The Teachings of Yogi Bhajan, July 26, 1996

"There are not trees better than others, neither plants better than others, nor fish better than others. When a man believes that there are trees, plants or fish better than others, he can also believe that there are human beings better than others, and these humans should disappear so that the ones that are better can live on," this is an important thought that comes from Williche elders.

—Manuel Muñoz Millalonco, November 2009

INTRODUCTION

Local and Global Health: A Difference in Approach

Local and global connections exist all around us. Yet, there are situations where local voices may get lost in global decisions, or when global actions create positive and negative changes on the local level. The Williche Council of Chiefs' development of their own health care program illuminates these relationships between local and global connections. It displays how knowledge circulates across time and space, and how the interactions of this transfer create what Anna Tsing refers to as *friction*: "the awkward, unequal, unstable, and creative qualities of interconnection across difference" (2005:4). Connections created through difference have contributed to the current relationship between the Williche Council of Chiefs and various health authorities in Chile.

Before I speak about the local partnerships that have developed, there is a history involving a particular global action, which created a very negative response on the local level, that needs to be understood. This was a global attempt to catalogue the existence of "disappearing" indigenous people by collecting their DNA through the Human Genome Diversity Project (HGDP) (Roberts 1991). When this project began, there was a sense of urgency to harvest indigenous peoples' DNA because "as they vanish, they are taking with them a wealth of information buried in their genes about human origins, evolution, and diversity" (Roberts 1991:1614). Advancements in technology and science, such as molecular tools to discover more genetic markers, supplied the mechanisms for such work to begin (Roberts 1991). Projects such as this need political and financial will to succeed; this one hit the mark with targeting a global health interest as "data on genetic

variation may shed light on why some [indigenous] groups are more susceptible to certain diseases than others" (Roberts 1991:1614).

The breadth of this project is evident in its predecessor, the larger Human Genome Project (HGP). The Department of Energy and the National Institutes of Health in the United States formed the Human Genome Project; however, it morphed into an international effort with contributions from the United Kingdom, Japan, France, Germany, and China (U.S. Department of Energy Genome Programs 2012). It is important to recognize that it was not just the key players from the colonial West that were involved, but also those in Asia. This network is an example of how the relationships that tie global forms together shift and assemble (Ong and Collier 2005:4). The concept of a global assemblage "suggests inherent tensions: global implies broadly encompassing, seamless, and mobile; assemblage implies heterogeneous, contingent, unstable, partial, and situated" (Ong and Collier 2005:12). What I explain below is an example of the tensions these assemblages can create.

To begin with, everyone involved did not support the success of the HGDP and the approach caused critique from academic and indigenous communities. For Sandra Bamford (2007), the HGDP is an example of the Western world's take on how to do science. Concern over the vanishing of indigenous peoples was related to a loss of biological "otherness," a loss of gene frequencies with the relevance of culture being excluded (Bamford 2007:151). She notes that

> biology has long served as an orienting device for Europeans and North Americans. Since Darwin first published The Origin of Species in 1859, a *biological paradigm* has furnished Western audiences with a set of tropes through which we have understood our relationship to other human beings and to nonhuman species. . . . a biological framework has figured centrally in how

> Westerners define bodies, persons, gender, ethnicity, and the place of human beings in the organic world. (Bamford 2007:5, emphasis added)

The manner in which the HGDP understood, and wanted to categorize, human diversity was being done from a biological paradigm. It was assumed that DNA and genomes would hold a key to illness causation, which completely excludes any social determinants of health.

The HGDP roused protest from the groups it was concerned with "preserving" as indigenous people refused to be

> "museumified" in the HGDP's modernist discourse of nostalgia and loss, indigenous activists have argued that money should be spent not on preserving indigenous peoples in genetic databases, but rather on channeling funds to help those communities participate in the world in *ways that they themselves might choose*. (Hayden 2003:34–35, emphasis added)

What I take from this example is a clear clash between a Western based scientific concern of gathering up all the available data before it disappears, and some indigenous groups that are worried with their social, cultural, and biological survival. The HGDP was also considered to be a form of "biocolonialism" as it had the potential to turn genetic samples into "biological weapons," which would be controlled by the governments who had the power and knowledge to do so (Santos 2002:92). Furthermore, in the mid–1990s there was media attention around the United States Department of Health and Human Services' patent of a cell line, the T-cell leukemia virus, that their National Institute of Health (NIH) had developed from a blood sample taken from a Hagahai male in Papua New Guinea in the late 1980s (Bamford 2007; Santos 2002). This patent granted rights over the use of that "Hagahai individual's virus-infected cells for commercial purposes," an action perceived as "genetic colonialism" (Bamford 2007:154). The NIH is the same organization that formed the HGP.

These global events are intimately linked to Chiloé and the Williche Council of Chiefs' development of a health care program. Just as other indigenous groups were protesting both the HGP and HGDP, so too were those in Chile in 1995. At this point in time, the WCC discovered that genetic samples of their people had been taken through an agreement between the state's health services and a Japanese university. Japan was, as noted above, a supporter of the HGP. Pedro, who is a member of the Williche Council of Chiefs, explained the gravity of this situation:

> When denouncing the action of the human genome project, through a Chilean project, which was indirectly linked with them, we realized that they had extracted genetic samples in our population, inappropriately, without authority, without consultation and without clarity about the destination that those samples had, . . . We learned that ten years before in 1985, a Japanese mission had been in Chiloé investigating a Williche antibody gene, which is the adult T-cell leukemia, a type of cancer cell, and it produces a virus that affects people of north eastern Japan. Then this mission, . . . came to the south of the world and took samples under false pretences, in Chiloé, in the Chiloé Williche population, . . . telling the Chilean doctors who accompanied them on their opportunity that they were doing research on a virus . . . and that this virus was in the Williche population; and actually they were studying an antibody and they were taking samples of the antibody. We learned ten years later when they published the results of the study, and at that point we realized that it had great military and commercial potential. Because the antibody that was isolated in Williche genetics led to the development of a vaccine, but also on the other hand, it generated conditions for spreading a virus to people who had no antibodies. . . . while we learned about this 1985 study in Chiloé, we also learned that in the world at that moment in 1995 or 1996, there were at least 26 patents on human genes that were being processed in the World Trade Organization. Then those patents on human genes directly affected a fundamental human right, because they were creating conditions to assume or take ownership of the human genes of people who were alive, and they made it [the patent] about their cells and cell lines.

It appears that Chiloé was to Japan what Papua New Guinea was to the United States. The discovery of the actions of Chile's health services and universities, with Japan prompted the WCC to develop a *chafun*—Williche concept for a circle of conversation—with the Ministry of Health. The attention of both the HGP and the HGDP resulted in the

creation of a local dialogue between the Williche Council of Chiefs and the Chilean State's Ministry of Health. An "interconnection across difference" occurred (Tsing 2005:4).

Once the dialogue started, another surprise came to the WCC, as noted by Pedro: "we realized that the health officer, health people of the province, of the region, had no idea what it meant, the patenting of genes, but more than that, they had no idea who Williche are, or what their problems were, nor what matters they had, they faced a complex situation." The WCC then took it upon themselves to ensure that they had a voice at the table when matters of health care were discussed. The first issue the WCC brought forward was that there is a different reality on the island. As Pedro explains, Williche were the "least consulted in the public health system," and that on Chiloé there was a "high level of distrust towards the health authority," which led to the underuse of the health care system. The second issue the WCC raised was that when the state deals with the Council and Williche people, it needed to not view them as a sick population but as a healthy population. As Pedro described it, the Council was inviting health authorities to "share a view that was more on health rather than on disease," and in doing so, they wanted to change the ministry's approach to health.

In this thesis, I examine the space and place of how expert knowledges—that are epistemologically and ontologically different—meet and are enacted, specifically through the experiences of medical plurality on islands. It is important to research this since the "global circulation of expert knowledge produces particular relations of power between policy makers and policy subjects" where health is concerned (Janes and Corbett

2009:174). The concept of balancing the role of expert knowledges involved in intercultural health care on islands, is what weaves these chapters together.

The objectives of this thesis are (1) to learn about intercultural health that is practiced in Chiloé Island through community based, and comparing this approach to practices in South Pacific islands; (2) to understand and assess the implications of the "healthy islands" discourse that arose out of the South Pacific; (3) to articulate the relationship between the disciplines of island studies, anthropology and post-colonial studies; and, (4) to explore how the ontologies of health care are informed by expert knowledges.[1] By expert knowledge I am broadly referring to European cosmology, which includes biomedicine, and Williche cosmology, which includes their ancestral health system. As such, the aim of this thesis is to understand the role of "expert knowledges" in the creation of medical plurality on islands. As a guide to achieving this aim, there are two central research questions that I address throughout the thesis:

1) How do the global assemblages of colonialism and neoliberalism influence individual well-being and local health care ontologies as practice on islands?

2) What is the space—physical area or locale—and place—position or role—of medical plurality on islands?

Scope and Social Significance of the Research

After more than 20 years of lobbying various health authorities in Chile, the Williche Council of Chiefs successfully influenced public health care practices in Chiloé. With the goal of integrating concepts from their cosmovision (the way they know and understand the world) into the national health system, the Council has worked diligently

at maintaining a conversation about health with federal and regional offices.[2] In 2010, this conversation resulted in the implementation of the Intercultural Complementary Health Care Program (ICHCP) in the Chiloé Archipelago. This program is an example of medical plurality, which refers to "not only the existence of a variety of explanations and typologies of illness but the utilization of more than one system. A medical care system includes the knowledge, practices, personnel, and resources that structure and pattern the way health care is sought and treatment is received" (McGrath 1999:484). The ways in which the ICHCP came about were unique to the environment and culture of Chiloé, yet the struggles to balance expert knowledges involved in medical plurality are similar among other indigenous islanders the world over; a case in point are those in the South Pacific, which I use as a comparison to Chiloé.[3]

What initially drew me to the South Pacific was the work of the Western Pacific Region of the World Health Organization (WHO). In 1995, the *Yanuca Island Declaration on Health* was created, and adopted: "The concept of 'healthy islands' as the unifying theme for health promotion and health protection in the island nations of the Pacific for the twenty-first century" (WHO 1995:1–2). Both my interest and experience with islands made this discourse extremely appealing. I wondered if such a policy would benefit the work of the WCC in Chiloé. Instead, after reviewing the meeting reports from this "healthy islands" initiative, I found that the approach to practicing medical plurality was much more institutionalized, top-down, and neo-colonial. In spite of this, the value of the reports is that there are many similarities between health concerns in the South Pacific and Chiloé, such as increases in noncommunicable diseases.

The "double-burden" is the term used to describe the situation of both communicable and noncommunicable diseases (NCD) in the Pacific (WHO 2005b). The problem is that diseases circulated around the colonial period (tuberculosis, measles) still exist; additionally there are new communicable infections such as HIV–AIDS and flu pandemics (e.g. H1N1). Many indigenous islanders have undergone dramatic health changes due to so-called "diseases of modernization," or NCD. Villages in Papua New Guinea went from having decreased rates of blood pressure with age in the 1960s, to now epidemic proportions of obesity, diabetes and cardiovascular disease (Lewis and Rapaport 1995:219). As of 2009, NCDs were "the leading cause of mortality (70%–75% of all deaths) in the Pacific. The prevalence of noncommunicable diseases and risk factors, especially diabetes, overweight and obesity, is among the highest in the world" (WHO 2009:16).[4] The exploration of this problem by the WHO's Regional Office in the South Pacific, has shown that the cause of the problem is widespread and in some ways out of the hands of national governments (WHO 2007).

The rise of noncommunicable diseases is a serious concern for many islands and is attributed, I argue, to the actions of the body politic, "referring to the regulation, surveillance and control of bodies," the social body a way to think of "nature, society, and culture" and the individual body (Scheper-Hughes and Lock 1987:7; Foucault 1984c).[5] As such, it is necessary that there be co-operation among all of these bodies for the development of a solution. However, each of these bodies is not a concrete static entity: there is a multiplicity within and across them—a theme developed throughout this thesis—that complicates their working together (Mol 2002).

Global health policy today is informed and shaped by past colonial ideologies, which encourages the development and dissemination of biocolonial policies (Thomas 1994; Santos 2002). Global assemblages have, in some ways, universalized and institutionalized conceptions of health, sickness and healing (Ong and Collier 2005; Tsing 2005). These concepts have not been understood as multiplicities (Mol 2002), but instead unified into tidy packages that fit within a biological, and therefore biomedical paradigm (Bamford 2007). Health care systems based on biomedical models present a narrowed and culturally specific view of what health means, what disease etiologies can be and how one is able to heal (Good and DelVecchio Good 1993).[6] Thus, I consider how themes of *intervention, integration* and *institutionalization* are part of colonial health ideologies, which have persisted through the use of biomedicine, and shape current health care policy (Thomas 1994; Comaroff 1993).

This thesis examines how indigenous health technologies (IHT) are adopted into health care systems on islands. It explores how local practices of health care are influenced by colonialism, global health policies, and the state (Thomas 1994; King 2002; Janes and Corbett 2009). A state can exercise "bio-power" through concepts like 'population,' and over individual bodies—it can supply or deny health care services (Foucault 1990). Does a state have the responsibility of providing *accessible* health care? Herein lies part of the problem: who defines what accessible health care is? Due to current health problems on islands, and the "frictions" between local and global practices of health, there is a need for medical plurality (Tsing 2005). On the one hand, integrating indigenous healing practices and knowledge with biomedicine addresses both the social and biological determinants of health, and the needs of the public. On the other hand,

there are dangers in how the integration is done, namely because there is a fear of the biomedicalization of indigenous healing practices and technologies (Lock 1980; Lock and Nguyen 2010).

Within and outside of the "healthy islands" discourse, there is pressure from global health organizations—the body politic—to institutionalize IHT (Robinson and Zhang 2011). There are two different models of medical pluralism that I explore in this thesis, a localized approach that the Williche Council of Chiefs employed, and an institutional approach used by global health bodies in the South Pacific. Both of these models illustrate an imbalance in the relationships between expert knowledges involved in practices of medical plurality. Is it doctors who are learning more about and adopting IHT, or is it indigenous medicine practitioners who have to undergo change and biomedicalize themselves (Lock and Nguyen 2010)? Should it be both, or neither? I have an issue when only certain practices or technologies of an indigenous health system are integrated, such as the use of herbs for healing, and not the whole system. Health care ontologies get taken out of context. I argue that IHT and systems should be supported by the state within a framework that allows for communities to participate and be the decision makers about what kinds of health services are available and accessible; that the conditions of choosing how medical pluralism takes shape exist, and that indigenous people have the right to blend healing practices on their own terms (Hayden 2003).

Methodology

Theoretical Works and Concepts From Island Studies, Anthropology, and Post-colonial Studies

Island Studies:

The study of islands (Nissology) has received a growing audience in the last twenty years. It presents itself as an interdisciplinary engagement with those who live on islands, including the policies that govern island lives and topics covering everything from tourism to climate change; it is the "study of islands on their own terms" (Baldacchino 2004:272). Islands are good to think with, as Jared Diamond notes "because processes unfold faster and reach more extreme actions in such societies, making them especially clear illustrations" (2005:20). I am not concerned with the speed in which processes unfold or the extremity of their outcomes, but I am interested in an island's ability to clearly illustrate, as clear as a partial view can be (Clifford 1986a), that there are many relationships, histories, and ontologies that influence how processes unfold.

What I have learned from using an "island imagination" is that relationships can be examined in a thorough way that may be less apparent on mainlands. Don Nutbeam suggests that on islands:

> economic development, environmental management and health promotion are linked to a much more tangible and immediate way than is apparent in larger and more developed countries, where greater wealth and the complexities of economic and social systems provide substantial buffers.
>
> In the Pacific islands, health is much more overtly considered as a resource in itself. (1996:263)

I suggest that all islands should consider human and environmental health as a resource. My contribution to Nutbeam's analysis is to show examples of this triad—health, economy and environment—to deconstruct it, and to build upon the rationality of it. I focus particularly on health and islands. While environmental management is slightly touched upon, it is too large a topic for this thesis. The link between economic development and health promotion on islands is complexified when understood in the

context of global assemblages (Ong and Collier 2005), and is examined throughout this thesis.

Health promotion on islands must be understood through the examination of the historical and current effects of colonialism on both individual health and global health policy. The discourses of "development" and "modernity" also play a role here, however, they are secondary to, yet interrelated with colonialism in this analysis. Similarly, economic development on islands cannot currently be examined without considering the effects of neoliberal economies. The enactments of capitalism, free trade, and resource extraction that are part of these neoliberal economies are discussed. The study of islands through Nutbeam's framework, demonstrates how nissological discourse "can be a powerful force towards a better understanding of the world and the furtherance of knowledge" (Baldacchino 2006:6).

Nissology examines how the image of islands has been constructed. Islands have been referred to as a "post-colonial trope, one traceable to Eurocentric assumptions of dominance, and only recently challenged by those with a capacity to see past the screens and obfuscations" (Hay 2006:28). They have been frequently placed in a dichotomous relationship against a modern and developed continent (Deloughrey 2004; Steinberg 2005). For example, within the British colonial view, "islands" were colonies—which may or may not have been geographical islands, although most were—as Phillip Steinberg notes these "islands" were depicted as "isolated, backwards, controllable, and valuable primarily as sites for plantation production, for extraction of raw materials, or for military outposts" (2005:255). This view is ironic as Britain itself is composed of

various islands; however what I take from this is an insight into imperial paintings of islands as colonies and thus subjected.

Throughout European colonial history there has indeed been an "obsession to control" different aspects of islands (Baldacchino 2005:247), including their borders, waterways, natural resources, and populations. But what is it about an island that encourages such a desire? Rod Edmond and Vanessa Smith shed some light on this puzzle as they suggest "Particular features of the island, then—its *boundedness* and discretion, its microscopicality—render it available to ideal colonial fantasies and extreme colonial realities" (2003:6, emphasis added). Islands as bounded entities can be a dangerous construction, especially as Kirch notes (Baldacchino) when "boundedness is confused with closure" (2004:272). Or in the case of islands being conceptualized and treated as "natural laboratories" (Edmond and Smith 2003; Cliff et al. 2007; Baldacchino 2006; Quammen 1996).

Carol Farbotko cautions against the endorsement of island laboratories, because "islands imagined as 'natural' laboratories embody positivism's powerful allies: certainty and closure. They help to explain and reinforce discreteness. They function as a means of dividing up the world into knowable portions" (2010:53). Viewing islands as having such boundaries removes the relational and holistic component that Epeli Hau'ofa (1993) is famous for supporting. I highlight the tendency to construct islands as bounded objects because of its theoretical importantance.[7] Boundedness creates a paradigm where hard edges and boundaries are valued over seeing "the totality of their relationships" (Hau'ofa 1993:7). It allows for a separation of the global and the local, the island and the continent, and it masks the relational aspect of nissology that I am drawn to.

What I attempt to show with this thesis is how the study of islands can indeed illustrate the relationship between the economy, environment, and health. They are not bounded entities, the economy does not have a clear border with the environment; they interrelate. Nissology also shows us that the local and global are not separate, and that there is a need to "destabilize the popular notion that islands are isolated geographic spaces from the larger forces of globalization and modernity" (Deloughrey 2004:298). To extrapolate, different paradigms, epistemologies, and ontologies are not completely bounded; there is a relational component. The current picture of health on islands cannot be examined by only looking at the island under question; this would present a narrow, bounded, and closed perspective. Instead one must look at historical as well as current relationships between a particular island and the rest of world.

One cannot discuss the discourse of nissology without touching upon "islandness." Some suggest islandness is linked to ones identity or sense of place (Stratford 2008; Péron 2004), or that it is a "metaphysical sensation" (Conkling 2007:191). The definition I am the most comfortable with comes from Godfrey Baldacchino who notes: "Islandness is an *intervening variable* that does not determine, but contours and conditions physical and social events in distinct, and distinctly relevant, ways" (2004:278, emphasis added). However, testing for and proving this island variable, along with islandness, is no easy task.

I do believe though that through the "othering" of islands and islanders (Said 1979), as mentioned previously, there is almost a kinship felt among islanders. It involves accepting the truths and falsities of what it means to live on an island, and what is expected of an islander. To know there a culturally constructed difference between

islanders and mainlanders. I personally have spent enough time on islands (raised on Cape Breton Island, lived six years on Prince Edward Island, and spent nine months on Chiloé Island) to know that there is something there that I cannot quite put my finger on—perhaps this is islandness? I do use "islandness" with a word of caution, because the definition of the term is relative to context. I say relative because the idea of islandness is problematic. It is a conceptualization that fights for definition among island studies scholars who mostly speak English. When you try to translate it, for example into Spanish as I had to, I found myself grasping at straws. Many attempts at translation could not quite convey the term.

The relativity of the concept was extremely apparent when I asked Chilotes to define islandness. The definition varied from person to person. Some felt that life on the grand island of Chiloé was not island living, because they have town centres, electricity, shops, internet and most of the other conveniences of living on the mainland. However, a sense of islandness was still felt to exist on the smaller islands in the archipelago, where there was an attachment to the land and they deemed that life was calmer there. Many also associated islandness with isolation and insularity or a source of identity and culture.

What I have taken from this is that islandness is not a bounded, universal term; it changes from the island you are standing on to the individual islander you are speaking with. The variable of islandness that I explore in this thesis is that of relationality. It is a way of allowing "islands boundaries [to] invite transgression; inspire restlessness; demand to be breached; . . . Perhaps the island edge is more than just permeable; perhaps it is actually the portal to roads and sea-trails fanning out to other (is)lands, a natural

bridge to the world beyond" (Hay 2006:23). Perhaps what nissology can teach us is that in one way or another, everything on earth is connected.

Anthropology and Post-Colonial Studies

The connection between island studies and anthropology is an easy one to make, as early anthropologists such as Margaret Mead, Bronisław Malinowski and Alfred Radcliffe-Brown are known for their work with island peoples. Yet the same is not true for post-colonial and island studies, as Rod Edmond and Vanessa Smith note:

> Island stories have tended to slip the net of postcolonial theorising. Within a history of imperialism that has focused on the politics of territorial acquisition and the displacement or colonisation of large-scale populations, islands are figured as negligible, purely strategic sites. The dismissal of the colonial politics of the island is an act of historical repression . . . Some of the most brutal colonial encounters have occurred on islands . . . where the license of enclosure has enabled campaigns of annihilation to be enacted upon local populations. (2003:5–6)

With this thesis I bring together these three fields of inquiry, as mentioned above. I draw heavily on the works of Sandra Bamford, Michel Foucault, Margaret Lock, Annemarie Mol, Aihwa Ong, Nicholas Thomas, and Anna Tsing.

The main form of knowledge production within anthropology is ethnographic fieldwork. Aihwa Ong informs us "the challenge for ethnographic research is not to find an 'appropriate' scale of action—national, global, or local—but to identify an analytical angle that allows us to examine the shifting lines of mutation that the neoliberal exception generates" (2006:12). The analytical angle I am proposing is a post-colonial geography of health on islands. This position encompasses the national, global, and local as well as the past and present. The use of post-colonial theory for my analytical angle is relevant, as noted by Warwick Anderson:

> It signals a critical engagement with the present effects—intellectual and social—of centuries of 'European expansion' on former colonies and on their colonizers. . . . postcolonial analysis thus offers us a chance of disconcerting conventional accounts of so-called 'global' technoscience, revealing and complicating the durable dichotomies, produced under colonial regimes, which underpin many of its practices and hegemonic claims. (2002:644)

This approach fits well with an examination of health care ontologies as practices in Chiloé and the South Pacific. As well, Stephen Slemon's view (Williams and Chrisman) is insightful, as the concept of post-colonialism

> proves most useful not when it is used synonymously with a post-independence historical period in once-colonized nations, but rather when it locates a specifically anti- or *post*- colonial *discursive* purchase in culture, one which begins in the moment that the colonising power inscribes itself onto the body and space of its Others and which continues as an often occluded tradition into the modern theatre of neo-colonialist international relations. (1994:12)

In this thesis I take into consideration the how bodies (individual, social and political) and spaces and places of medical plurality on islands, have been carved by colonialism.

On that note, I would like to broach the subject of binaries—local–global, Western–Indigenous, modern–traditional—something that anthropology has struggled with (Anderson 2002). I have concern with using the term "traditional" in reference to remedies or medicines practiced by indigenous people. (The term indigenous itself is also contentious.) Just as islands have been dichotomized against the modern mainland, so too have indigenous peoples been posed against Europeans. The term traditional in this sense has been used as a way of differing from "modern," western medicine. While organizations such as the WHO use "traditional medicine," I prefer to use indigenous medicine, health technologies, or health systems.

I have also struggled with the relationship between indigenous (or aboriginal) people who live on islands, and the terms islander and islandness. In many ways these are

difficult to separate. For example in Chiloé, many of the practices associated with being Chilote are also what it means to be Williche. There is a blurring of identities. Indeed there are similarities between both groups as Elizabeth Deloughrey notes: "Like the presumably primitive native visited by the western anthropologist, islanders are often perceived as symbols of the evolutionary past. . . . In this sense, natives and islanders become 'creatures of the anthropological imagination" (2004:302). A difference I would point out is that many indigenous people who live on islands could receive a double negative stereotype as both islanders and indigenous people.

Furthermore, many islanders may consider themselves to be indigenous to an island; however, their ethnicity may be of European decent. There are also situations where islanders who are indeed of "indigenous" descent, such as those in many South Pacific Islands, would not consider themselves to be ethnically "indigenous," they are simply Tongans or Fijians. For the purposes of this thesis, I try to clarify this by referring to people with "indigenous" ethnicity that live on islands, such as the Williche in Chiloé as indigenous islanders.

The local–global binary is addressed within medical anthropology: how do we find the "local" in global health? According to Craig Janes and Kitty Corbett, "the task is to understand how various assemblages of global, national, and subnational factors converge on a health issue, problem, or outcome in a particular local context" and that these assemblages "interact with local institutions, social worlds, and cultural identities through unpredictable and uncertain processes" (2009:169). An example of the reach these assemblages can have is how the outcry against the HGP and HGDP sparked global and local (Chiloé) protest, which led to the Williche Council of Chiefs having a dialogue

with the state. This dialogue created a circle of conversation around intercultural health in Chiloé, which resulted in the Intercultural Complementary Health Care Program.

Research Methods

This study was conducted over four months using participatory research methods, which privilege the building of rapport, and are central to the anthropological research process. I find this style of research works well in working with First Nations communities. Linda Tuhiwai Smith (1999) has certainly given me "food for thought" on what I, as a female, white, Euro-Canadian, medical anthropologist need to consider when partnering with First Nations organizations. One lesson I learned from previous work with Williche in Chiloé and Mi'kmaq in Cape Breton, Nova Scotia is that I would learn more than I would share. The Williche Council of Chiefs of Chiloé was an active partner in the research design and process (Esterberg 2002). Before I began my fieldwork, Manuel Muñoz Millalonco visited Prince Edward Island and informed me of the changes that were taking place with the Council's health program. Once I arrived in Chiloé, I adapted the project to the then current situation, needs of the WCC, and my own interests.

In January 2010, the Council's Health Program (CHP) had been undergoing a trial implementation with various public health centres entitled: The Intercultural Complementary Health Care Program (ICHCP). The Council's health team travelled to various family clinics where they provided health services. I was able to "go-along" with the health team, helping out with what I could (Kusenbach 2003).[8] The specific ethnographic objectives were: (1) to learn about Williche's cosmovision and the ways in which this shapes the WCC health program; (2) to learn how and why the integration

between Chiloé's public health clinics and the WCC health program occurred; (3) to investigate what the concepts of health, curing, and illness meant; (4) to investigate what the perceived causes of illness are and how this influences the treatment for the illness; and (5) to learn what the connections are among land–island, health and identity in Chiloé. The Council approved these objectives, my participation with their health team, and the collection of data employing qualitative research practices.

This research followed a qualitative research methods design, and was exploratory in nature with an inductive approach. I chose these methods because of my previous experience working with First Nations communities and training in social science research methods. While literary sources provide theoretical insight, the collection of primary data is central to my thesis. Various secondary data sources were used, such as theoretical works and grey literature (especially WHO reports from the "healthy islands" meetings).

The permission to ethically collect primary data was granted by the Williche Council of Chiefs, after a formal presentation, and the University of Prince Edward Island approved my ethics application. A variety of standard ethnographic methods were used, such as formal to informal, structured to semi-structured interviews, participant observation, actively participating in the activities of the WCC health team, in addition to the experience of living in Chiloé for four months. The nature of the research (e.g. number of participants, use of selective sampling) meant qualitative methods would be more effective than quantitative. A multi-sited ethnographic approach was used (Marcus 1995); interview questions were organized for three different groups. This approach

provided a wider perspective on the praxis of integrated intercultural health in the Chiloé archipelago (Mol 2002).

In order to address the research questions and objectives, I held seventeen face-to-face interviews with individuals in three distinct field sites, which were agreed upon by the Council of Chiefs and I. Each site was in itself a locale, as well as a group of people who contributed towards the study (e.g. interviewees, staff with the various health programs). There is no ranking order to the sites: (1), *Mapu Ñuke*, which is the name of the WCC centre where their health program is run. This site includes members of the Council's health team. Additionally, I interviewed two members of the Williche Council of Chiefs. The seven interviews were held in either the WCC centre or participants homes. Site (2), Chiloé's public health centres including Centros de Salud Familar (CESFAM) [Family Health Centre] or Centro Communtario de Salud Familar (CECOSF) [Community Family Health Centre]. There were four centres that I visited during my time in Chiloé which were all a part of the ICHCP. The six interviews were held at these centres, I interviewed public health practitioners: pharmacist, mid-wife, social worker, psychologist, nurse, and doctor. Site (3), Chiloé's public health offices located in Castro and Quellón. I was able to speak with employees at various levels of health administration. The four interviews were held in each individual's office. In total, seventeen individuals were interviewed across the three field sites. I had rapport with some individuals due to my previous time in Chiloé, others I met with a few times before arranging an interview, and some I met only when it was time for an interview. I have given all participants pseudonyms and cleaned the quotes of identifying information.

When I returned to Chiloé in March 2010 my level of Spanish was low intermediate. This complicated the interview process as all interviews were held in Spanish. For those with Williche ancestry, some concepts in Mapudungun were also spoken of. I knew my ability to pose follow-up and probing questions would be limited so I structured my interview questions as simple as possible. I received assistance from Marianna Soto Quenti in ensuring my translation of questions was accurate. The interviews did not start until May and by this time my level of Spanish had increased. However, I decided it would be better to hire two native Spanish speakers in Chiloé to transcribe verbatim, in Spanish, the interviews and translate them to the best of their ability. Two of the interviews were directly translated into English, this posed some problems with confirming the translations.

I received ethical approval for assistance with the transcription and translation of interviews. Additionally I reviewed all transcriptions and translations of the interviews. This took a fair amount of time, but it allowed me to immerse myself in the data. I then used the method of open coding which is to "work intensively with your data, line by line, identifying themes and categories that seem of interest" (Esterberg 2002:158). The coded interviews were then analyzed along with my field notes producing a large and rich amount of data. An analysis of the World Health Organization's "healthy islands" meeting reports was conducted once I had returned to Canada.

Chapter Map

The style of this thesis is structured somewhat differently from the standard layout since there is no literature review or analysis chapter per se. Rather I have chosen to

weave primary data with literature and theory in three chapters, each of which is also structured a bit differently depending on the context.

In chapter one I address the relationships between colonialism, health and the economy, drawing from examples in the South Pacific and Chiloé. There is a discussion on how global assemblages influence health on islands and the frictions that these apparatuses create, with an overview of how the body politic influences the health of the individual body. In the first part of the chapter I focus on how colonialism has influenced the health of indigenous islanders as well as health policies. I discuss the concept of "healthy islands" in relation to ideals of the "universal" and "culturally specific." In the second half I turn my attention to the link between the economy and health on islands. I do so with examples of resource extraction in Nauru, free trade and food importation in South Pacific Islands, and aquaculture industry in Chiloé. I connect the themes of health, economy, and environment following Nutbeam's (1996) theory.

Chapter two compares Western science health care epistemologies and ontologies with those of Williche–Chilotes. I start with the background of these two systems and then continue with an analysis of health care ontologies—health, illness–disease, and curing–healing. There is further engagement with the universal and culturally specific knowledge debate. I show how there is a disjunction between the expert knowledges involved in providing health care in the Chiloé archipelago and question whether or not a path to balance can be found.

Chapter three also has a comparative aspect; it explores the space and place of medical plurality on islands. The chapter begins with a history and description of the ICHCP in Chiloé. It investigates the health care needs this program addresses. In the

second half of the chapter, I examine the role and integration of indigenous medicine in the South Pacific. There is a discussion on the body politic's pressure to institutionalize indigenous health technologies and a tracing of how IHT became valued by a global neoliberal economy.

In the concluding chapter there is a reuniting of island studies, anthropology and post-colonial literature. I reiterate how I addressed the two research questions. The benefits of Chiloé's ICHCP show how islands of medicine can be bridged.

Notes

1. The ontologies of health care I address are the practices of health, illness–disease and curing–healing.

2. Williche cosmology is a way of relating and interrelating with the world, for example humans are conceptualized as water, water that comes together, and links with mother earth. This cosmology is one of relationships and interconnections.

3. There are some interesting connections and similarities between Chiloé and Oceanic islands. Geographically the Chiloé archipelago and South Pacific Islands are located in the Southern Pacific Ocean, the main difference being in water temperature as Chiloé is a cold-water island. Both areas were also subjected to colonialism and colonial illnesses. They each have indigenous populations and strong connections to the land and sea.

4. According to the WHO, in 2008 the total NCD death rates per 100,000 population out of its 194 Member states, for females, ranks the Marshall Islands (1,316) at the highest, Tuvalu (992) is second, Afghanistan (953) is third and the next Pacific Island is Nauru (845) at thirteen. When we look at the same data for males we see that Nauru (1,367) is the highest, Afghanistan (1,285) is second, the Marshall Islands (1,280) is third, with Tuvalu (992) in twenty-second place and Fiji (928) in twenty-eighth. From this data it is apparent that there is indeed a pattern of ill-health caused by NCD in islands. This pattern also exists in high numbers in many mainland countries such as Afghanistan, Somalia, Ethiopia, Kazakhstan, and Malawi. (WHO 2011b)

5. Medical anthropologists have followed Foucault's analysis (1984c) and use this framework as a way to unpack biomedical and colonial notions of the body. I use this framework of the "three bodies" as a way to understand the parallels of NCD in Chiloé and South Pacific Islands.

6. I would like to clarify that there is no unitary construction of biomedicine, it is enacted through a series of engagements and practices which are plural in nature.

7. The construction of boundedness is applied outside of island studies. For example, the biological model creates and views the human body as "an autonomous and bounded entity" where mother and child are seen as separate or even competing bodies, which has led to "fetal endangerment" charges against mothers (Bamford 2007:14).

8. During my time in Chiloé I assisted the Council's health team as an anthropologist and participated in interviews that all new users of the Intercultural Complementary Health Care Program (ICHCP) underwent. This allowed me to learn about the variety of reasons why people were being referred to the Council's health team. I was also able to observe how members of the WCC health team and public health employees interacted with each other in a variety of settings, as well as attend meetings for the ICHCP.

CHAPTER ONE

> Our islands are vulnerable to the consequences of the many paradoxes of geography and history: While we are isolated physically from the continental land masses, we are firmly embedded in the tides of globalization and suffer many ill effects as a consequence.
>
> —World Health Organization 2005b:24

The islands this quote refers to are those in Oceania.[1] As noted, even their physical isolation has not shielded them from the flow of globalization, which is subtly linked to continental lands.[2] The archipelago of my fieldwork, Chiloé, has also been swept up in these tides. Themes I explore in this chapter—islands, health, and globalization—address the first research question, as well as the links among health, economy, and environment on islands. These themes are studied through the encounters of global assemblages, such as colonialism and neoliberalism (Ong and Collier 2005). These assemblages have a global reach, one that leaves in its wake certain outcomes, yet these results cannot be fully understood unless the particular is examined. Colonialism and neoliberalism may produce similar after-effects, with patterns on islands emerging (Quammen 1996), yet there is also great diversity in how they influence health on islands.

The term globalization in particular, warrants some explanation as it is often thought of generally as a solid thing. For the purposes of this study, I use David Held's argument (Firth) that globalization:

> refers to a shift or transformation in the scale of human organization that links distant communities and expands the reach of power relations across the world's regions. This shift can be mapped by examining the expanding scale, growing magnitude, speeding up and deepening impact of transcontinental flows and patterns of social interaction. (2007:111)

Interactions of interest are (1) how the power of expert knowledge flows between Western and indigenous knowledge systems; and (2) health patterns on islands. I agree with the argument that global forms are not static; they move and transform across time and space—they "assemble" (Ong and Collier 2005).

Travelling phenomena, such as "expert knowledge" and "universal truth" are able to seamlessly shift through global relationships with power and movements of knowledge (Foucault 1995). Some universal truths perform as bridges of knowledge, promising a "global dream space," instead; by contrast, they deliver a particular system, idea, or construction (Tsing 2005:85). The bounded conception of globalization is in itself one of these dream spaces. From the perspective of those pushing "globalization" it may be seen as modernization and progression, but for those who are receiving it, globalization can mean international mining and forestry corporations, a loss in local food security, or climate change (Tsing 2005). Globalization cannot be separated from the specific as they inform each other—they are related, not bounded entities (Tsing 2005).

As the realm of globalization encompasses more than I am able to discuss in this chapter, I am focusing on two key points: (1) the effects that colonialism has had on the health of those colonized, and global health care policies; (2) how practices of global commodification and trade have influenced human health. Global transformations have changed how economic systems work, how the environment and natural resources are used; and through colonial encounters epistemological and ontological conceptions of health have been altered. Just as societies around the world have different types of economies (although these are increasingly being acculturated) they also have different conceptions and practices of health and sickness (explored further in chapter two).

The relationship between globalization and health cannot be understood without exploring the enactments of colonialism, which was a transformation of distant communities globally.[3] The results of this are still taking shape today.[4] Shifts in local lives occurred through the spread of European illnesses that were unknown in the areas they "discovered." During the

> era of resource raiding and the labour trade, many islands in the Solomons and the New Hebrides [Vanuatu] were decimated by chicken-pox, whooping cough, measles, influenza, gonorrhea, tuberculosis and leprosy. . . . Almost all Polynesian populations fell by at least half, and Micronesian societies risked complete extinction when new disease compounded the effects of natural disasters. (Denoon 1997a:244)

Life was reorganized according to colonial rules and standards of health and sanitation (Thomas 1994). On a praxiographic level, biomedicine was spread through colonialism, which today has global support (Mol 2002).[5] These technologies were viewed (and by some still are today) as being superior to indigenous health systems.

The connection between colonial and "global" ideologies has not stopped with the formal end of the colonial period. Development policies promote conceptions of "modernization" and "globalization" that "continue European expansion by another name" (Harding 2008:133). As an example of this process, I refer to the "healthy islands" concept, endorsed by the World Health Organization's Regional Office for the Western Pacific, Oceania. I question the "healthy islands" approach as a way to develop policy and health promotion from both a post-colonial and nissological perspective. While the policies developed at "healthy islands" meetings may have the best intentions, they are nonetheless being designed within a neo-colonial context.

Colonialism influenced economic systems globally: In Marxist thinking colonialism is seen as a "particular phase in the history of imperialism, which is now best

understood as the globalisation of the capitalist mode of production, its penetration of previously non-capitalist regions of the world and destruction of pre- or non-capitalist forms of social organisation" (Williams and Chrisman 1994:2). While colonial economic discourse is not explored as a main point, it is related to current enactments of neoliberalism, trade and commodification.

Therefore, in this chapter, I investigate how economic systems have influenced health on islands with examples of neoliberal economies, resource extraction, free trade, and aquaculture industries. Neoliberal economic policies that have informed this section are based on the technical recommendations to "give freer rein to market forces in economic life, to privatize public enterprises, to float currencies, to replace protection with free trade, and to reduce the freedoms enjoyed by organized labor while enlarging the freedoms of capital" (Firth 2007:112). These policies are often referred to as "American Neoliberalism" or "economic globalization" (Ong 2006:11). The connection and assemblage of global forms made through the various conditions of neoliberalism, "based on both economic (efficiency) and ethical (self-responsibility) claims," have changed health care practices on islands (Ong 2006:11). Through commodification and trade agreements, how people work, how they live, and the food they eat has changed globally. Over time this has altered patterns of particular illnesses and contributed to environmental changes, which has affected peoples' customs and health, as exemplified in both the South Pacific and Chiloé. Outcomes of these economic forms of development, when looked at on islands, expose a patterned relationship to the increase in NCD (Quammen 1996).

A counter argument could be that many global forms have brought positive outcomes for human health, such as the wide distribution of biomedical technologies including vaccines, antibiotics, the microscope, and pharmaceuticals. While each of these has made significant contributions to health globally, they have also added to a narrowing vision of what health care can and should be; they are universalized representations of a particular health system (Tsing 2005). A similar argument can be made for Euro-American economic systems: creating free trade agreements has opened up inaccessible markets. However, these actions often benefit a few powerful states or corporations and not the particular locale as Anna Tsing's (2005) work with Indonesian rainforests suggests. By exploring enactments of colonialism and neoliberal economic policy, I show how the current situation of health on islands is in a state of "friction" with global policies (Tsing 2005), specifically "healthy islands" policy, global economic trends, and the rise of NCD. The chapter is comprised of two sections, the first on the effects of colonialism and the second on the influence of commodification and trade, on health.

Colonialism and Health: The Ongoing Effects of Intervention and Integration

In order to understand the historical significance of colonial health policy I have examined instances of contact between Europeans and South Pacific Islanders. The consequences of colonialism have been accumulating since the "voyages of discovery" era. The first accounts of interaction were by whalers, traders, and missionaries, with the explorations of Magellan, Cook, and de Bougainville following (Thomas 2010). These explorers were taken with the physical health of Polynesians: upon his arrival "Bougainville likened Tahitians to Greek gods" (Denoon 1997b:115). This European

interest in islanders' health is a theme that arises over and over again throughout the Pacific and the colonial period.

Colonialism in the Pacific had a deadly start for the majority of islanders. The travels of explorers, missionaries and traders brought new religions, economic systems, and diseases that are now tied into global relations of power. Illnesses such as tuberculosis were thought of as "diseases of development, becoming almost an exact indicator of Christianity and other introduced institutions. In New Caledonia, Kanaks called it *christiano*, 'the disease of the Christians'" (Denoon 1997a:248). Pacific Islanders would have had their own local views on the causes of European illnesses, which would have been very different from European beliefs and not structured within a "biological paradigm" (Bamford 2007).

The ramifications of epidemics such as tuberculosis and measles are difficult to comprehend in the 21st century. It was even more difficult at the time for Europeans to understand the lasting repercussions of illnesses they introduced. We should keep in mind that Darwin's concept of natural selection was published in the *Origin of Species*, 1859. Moreover, Herbert Spencer's ideas around social Darwinism fed the notion that the "conquest of an inferior society by a superior one was the result of the action of natural law, and hence not only moral but imperative. This was a convenient philosophy for the rapidly expanding European powers and was used to justify their imperialism, colonialism and racism" (McGee and Warms 2004:8). Thus it is not surprising to find undertones of "racial decay" and Herbert Spencer's ideas around "the survival of the fittest" in European colonial accounts. The relationship between colonialism and health policy is important to trace because "medicine both informed and was informed by

imperialism, . . . it gave the validity of science to the humanitarian claims of colonialism" (Comaroff 1993:324).

For example, during the 1875 measles epidemic in Fiji "the colonial authorities blamed the victims for their ignorance and apathy" (Denoon 1997a: 245). As the Methodist John F. Goldie wrote (Thomas) on Fiji in the 1890s: "One thing is certain. The advent of the white man, though a contributing cause, is not the principal cause of the [population] decline, which has been going on for years" (1994:113). Opinions such as these held islanders responsible for their ill health—blaming Fijian's "filthy" living conditions as the principal cause of such catastrophic death—while denying the role of Europeans (Thomas 1994). After all, in the eighteenth and nineteenth centuries Europeans believed they were separated from these "savages" due to their civilized nature (Comaroff 1993).

In the eighteenth century, European concern over "the specific problem of the sickness of the poor begins to figure in the relationship of the imperatives of labor to the needs of production"; furthermore there was an "emergence of the health and physical well-being of the population in general as one of the essential objectives of political power" (Foucault 1984c:277). What was occurring in Europe was being transferred to the colonies and vice versa. The governing of public health in colonized areas became necessary as tropical diseases harmed Europeans and European illnesses depopulated local populations.[6] As Firth states, "Together with the calamitous mortality rates of *indentured labourers* everywhere, and the fact that doctors and nurses died, health became the first priority of colonial administration" (1997:278, emphasis added). Here we see a strong link between the needs of the economy and colonial health policy. This

relationship is brought up again in chapter three with global health bodies' interest in the integration of indigenous health technologies.

Ironically the depopulation of Islanders—caused by Europeans—became a reason for colonial authorities to control many aspects of the Pacific way of life. This is important because it helped to shape the justification for the greater civilizing mission of colonialism and "development's alibi" (Spivak 1998). Confusion over "the indirect ramifications of introduced disease, . . . was highly enabling, in the sense that the assumption that depopulation proceeded prior to the white impact located its causes in native behaviour and customs" (Thomas 1994:113). This assumption meant that in the hands of colonial authorities "almost anything to do with the organization of custom or village life could potentially be modified in the name of sanitation" (Thomas 1994:116). The depopulation crisis gave cause to the colonial administration's *intervention* in the Pacific way of life, which has become an "enabling violation"—colonial health practices cannot be justified by the advancements in biomedical technologies including the cures for illnesses Europeans introduced (Spivak 1998).[7]

Colonizers used various mechanisms of power to intervene in the social structure of those colonized. One of these is the panoptic, which Foucault defines as a "type of location of bodies in space, of distribution of individuals in relation to one another, of hierarchical organization, of disposition of centres and channels of power, of definition of the instruments and modes of intervention of power" (1995:205). The ways in which villages were relocated and organized during the end of the nineteenth century in Fiji is an enactment of the panoptic. From the perspective of the colonial administration, the amalgamation of villages "would facilitate not only 'regular medical inspection', and

better supervision in matters of 'cleanliness' but also 'inspection' in general"; keeping villagers in both sight and reach (Thomas 1994:121–122).

Yet, without realizing it, the reorganization and amalgamation of villages was actually more harmful than good in terms of health. Previous to colonization, "all societies were protected by the fact that many diseases require a population mass before they can become endemic. Oceania had long been isolated from dense populations and their infections" (Denoon 1997:115).[8] Who then, did the reorganization of villagers benefit? For Nicolas Thomas, the "amalgamation was not simply a policy which made certain populations more accessible to inspection; it was a discursive motif on the side of inscription and government, supplanting the disorder and irregularity of the past"—of the "uncivilized" (1994:123). These regulations could allow the colonizer to have power over the pacific way of life whether it benefited health and sanitation or not; they were more symbolic than practical (Thomas 1994:123). This symbolism is related to European notions of modernity, which offers an escape from an "undesirable past" (Harding 2008:179).[9]

By exploring colonial health policy from a post-colonial stance we learn how "information and regulation in a particular policy domain—health and sanitation—was at once a colonizing project in itself and a vehicle for more general surveillance and intervention" (Thomas 1994:107). Racism was a large part of this intervention as the "main thrust of policy was to impose international quarantines and racial segregation, protecting each 'race' from the disease of the others. Medical science therefore reinforced the racism which informed colonisers and infused their policy prescriptions" (Firth 1997:279).[10] The intervention into colonized lives was heavily based on having a fit and

able-bodied work force.[11] This was enforced through different apparatuses of power as they were "called upon to take charge of 'bodies,' but to help and, if necessary, constrain them to ensure their own good health," as was being done in Europe (Foucault 1984c:277). Technologies of health such as the panoptic or role of the doctor (Foucault 1995; 1984c) were practiced in Europe and the Pacific Islands. Colonial governments were concerned with labour and production; as such, ill islanders would be confined in lock-hospitals (Firth 1997).

The examples discussed here show how the economy (improved labour force), government surveillance, racial segregation and social Darwinism were all tied into colonial health policy. These policies in the Pacific and in other colonized places, were a reflection of what was occurring in Europe. The work of European-based health policies and their enactment overseas is a theme that is still pertinent today. I consider colonial health policy to be an "expert knowledge" that has informed current global health policy (further explained in chapter three). I take direction on this subject from Craig Janes and Kitty Corbett who note that: "analysis of the formation, dissemination, and local consequences of expert knowledge forms the core of the anthropological critique of global public health policy" (2009:173). This critique resonates with the concept of "healthy islands" supported by the WHO regional office in the Western Pacific.

Healthy Islands and Neo-Colonial Dream Spaces

To begin, I would like to address where the term "healthy islands" came from and how it was formed. In 1995 the Western Pacific Region of WHO and several Health Ministers and Permanent Secretaries–Directors from Oceania met to discuss changes with

health, the economy, and quality of life in the Pacific (WHO 1995).[12] This meeting was the first *Conference of the Ministers of Health of the Pacific Islands* and where the concept of "healthy islands" was adopted. At this time it was decided that "healthy islands" would be the theme to unite both health promotion and protection among member island nations (WHO 1995).

Since the inaugural conference, meetings of the ministers of health for the Pacific Island countries have been held every two years, with the most recent in 2011.[13] The World Health Organization's Regional Office in the Western Pacific convened this conference and the following eight. From 2001 onward, the conferences were co-organized with the Secretariat of the Pacific Community.[14] By 2009 there was a total of twenty-one small Pacific Island states involved.[15] Five larger states have also played a role in these meetings including Australia, Japan, and New Zealand attending most meetings with France and the United States attending at least the first. In addition to this, there has been participation from a variety of NGOs, aid agencies, and universities from the larger Pacific region, along with observers and groups under the United Nations.

According to the Ministers of Health in the South Pacific "healthy islands" should be "places where children are nurtured in body and mind, environments invite learning and leisure, people work and age with dignity, the ecological balance is a source of pride, and the ocean is protected" (WHO 2001b:5).[16] Their concept of "healthy islands" speaks to not only the influence of the "Pacific Way," but also a desire to have a new approach to health "where quality of life is taken into account, which emphasizes positive health, and the promotion of healthier living" (WHO 1995:1). This sounds like an ideal island to live on, does it not, the last remaining island paradise? My concern with this approach is

that it casts the "healthy island" as a place that is bounded and universalized. The achievement of such an island through policy implementation, as suggested in the "healthy islands" meetings, is unlikely.

I argue this formation of a "healthy island" is constructed as another "global dream space" (Tsing 2005); I would like to explore this further. This concern is encouraged through Anna Tsing's work on universals, which are "deeply implicated in the establishment of European colonial power . . . universalism was the framework for a faith in the traveling power of reason" (2005:9). The islands involved in the "healthy islands" approach are comprised of those from three sub-regions: Polynesia, Micronesia and Melanesia. Through "healthy islands" policy their health concerns have been generalized; the particular of the locale has been lost. In a sense health concerns have been globalized to the point that the local condition is overshadowed (a point further discussed in chapter two). The problem with this is that while many islands may suffer from the same problems, there are individual, local factors that influence both the causes and possible solutions. Most of these islands are independent states with pre-colonial populations, cultural knowledges, and forms of governance. Questioning the approach of using "healthy islands," as a way to develop policy and health promotion does not erase the universal. As "post-colonial theory challenges scholars to position our work between the traps of the universal and the culturally specific," I try to locate these traps within the discourse of "healthy islands" (Tsing 2005:1).

The idea that a "healthy island" could be attainable encouraged me—both as an anthropologist and an islander—to explore this concept ontologically. This second approach stems from the work of Annmarie Mol who presents a "praxiographic

appreciation of reality" (2002:53). What exactly *is* a "healthy island," is influenced by Mol's take on an "is" that is situated, related, not universal but local, and spatially relevant (2002:54). In order to find out what a "healthy island" *is* outside of the generalized definition provided at the first meeting of the Ministers of Health, I look further into how it is enacted within "healthy islands" policy and defined on Chiloé.

Within the "healthy islands" meeting reports is a detailed history of health concerns faced by Pacific Islanders. What I found interesting is how much these concerns changed over the years. I have pulled out the main themes of a few meetings to show how "healthy islands" are practiced. In 1995 the priorities were (1) develop the health workforce; (2) develop environmental health; and (3) supply and manage pharmaceuticals, medical equipment and essential drugs (WHO 1995). These are fairly general categories that could be applicable to all of the islands and fit within the "healthy islands" definition to a certain extent. Six years after the first meeting, the priorities in 2001 included: (1) communicable disease surveillance and response; (2) integration of traditional medicine; (3) control of diabetes; (4) stopping tuberculosis; (5) elimination of lymphatic filariaisis;[17] (6) significance of mid-level and nurse practitioners; (7) migration of health workers; (8) open learning for the purposes of building health professions; (9) health leadership program for mid-level managers; and (10) create a regional action plan on "healthy islands" for the next two years with the attempt to institutionalize the "healthy islands" approach (WHO 2001b). Compared to the 1995 priorities these have increased in number and become more specific.

Fourteen years from the first meeting, health priorities listed in the eighth meeting report's summary surround a variety of issues such as: (1) food security in relation to

NCD and supporting the Pacific Food Summit; (2) donor aid effectiveness in the Pacific; (3) climate change and the challenges this creates in Pacific Islands; (4) health systems strengthening and primary health care; (5) maternal, child and adolescent health; (6) pooled procurement for improving access to essential medicines in Pacific Island countries; (7) prevention and control of noncommunicable diseases; (8) the Asia Pacific Strategy for emerging diseases and the Pacific Regional Influenza Pandemic Preparedness Project; (9) human resources for health and the Pacific Human Resources for Health Alliance; and, (10) the prevention and control of HIV–AIDS and sexually transmitted infections (WHO 2009). From the list of concerns in 2009, it is apparent that the scope of the "healthy islands" theme has had to include much more than the three initial foci. How many of these objectives tie in with the idea that "healthy islands" are places where children are nurtured, environments are inviting, work and ageing are done with dignity, the ecosystem is balanced and the ocean is protected?

Oceania is now faced with the reality of the "double burden" of both communicable and noncommunicable diseases. Many islands have stated that they do not wish to develop more "national action plans, strategies and policies" for the NCD epidemic (WHO 2007:7). This resistance to further development of plans–policies is a local consequence of universal policy development because local governments are unable to manage the crisis of NCD (WHO 2007). Then there are also concerns with local food supply, climate change, the "brain drain," and having to comply with international aid agencies, and health and safely regulations in regards to pandemic preparedness and surveillance, such as the "International Health Regulations."[18] In short the islands that

subscribe to the "healthy islands" approach are over taxed with health policies while struggling to improve the level of health of their populations and island.

Chiloé—A Healthy Island?

Questioning the concept of "healthy islands" in Chiloé is an opportunity to locate the traps of cultural specificity (Tsing 2005). The question of "what is a 'healthy island'" uncovered a variety of topics and concerns about health care in the Chiloé archipelago. From the data a key issue arose: everyone needs to access some kind of health care, including rural areas in the grand island of Chiloé and the 30 smaller islands that make up the archipelago. The health authority does provide health rounds to these isolated areas with health teams. Some islands and rural communities are lucky enough to have a health post with a paramedic on site. However, these islands probably do not have roads and commuting is done by foot or boat. Roughly once a month, and usually via sea transportation, health teams do their rounds. Unfortunately boat travel is not always possible due to rough seas, leaving some communities unattended for two or three months. Isabel, a health care professional, spoke about the importance of accessibility; for her a "healthy island" is one that supplies its populations with medical rounds and the "tools so that they can maintain their own health because in some islands they do not even have medical posts." Tools in this regard are not only biomedical tools, but also information and knowledge about healthy lifestyles, illnesses, and local knowledge of medicinal plants.

The desire to have balance and ecosystem health also comprised this ideal of a "healthy island." For David, a health care professional, it would be a place where: "it is

not only to think that the people are not sick, I believe that it means from the environment up to the house of someone, from macro to micro." Raymundo, a Chilote health worker, explained that an island is healthy when we "live in an environment of balance, with the environment, society, our myths, our culture, and ourselves, maybe it is to be in balance with everything, maybe that is what generates the concept of a healthy island, being in constant balance with our environment, ourselves and our community." In order to have this balance, a "healthy island" is "an island where people are happy to live here and want to stay here," noted María who works as a health professional. Even though she is not originally from Chiloé, María found herself at home on the island and realized the importance of having a positive association with living there. This idea may seem simple but it actually encompasses a much larger problem for many island populations—emigration. Many of the smaller islands in the Chiloé archipelago have seen large population declines, generally men left for work, and youth have to leave for school. To be happy in an island is not as easy as the sun, sand, and sea myth many mainlanders believe it to be (Baldacchino 2007; Royle 1989).

How an island is developed—environmentally, socially, and economically—was valued by Pedro, a member of the Williche Council of Chiefs who required a "healthy island" to have:

> An ecosystem in equilibrium, where the pressures on ecosystems are regulated, where there is no social dumping, nor environmental [dumping] or where people may feel that their condition of insularity is not a disadvantage, it does not represent abandonment, it does not represent a lack of services. . . . A healthy island, is one that can project its own development from within, one that is not looking for a way to extend its tentacles, physical cords or connections with the continent, but it is aware that the continent must be connected to the island without losing its condition of insularity, without breaking the balance of the ecosystem.

These comments seem to be made in the context of natural resource extraction on the island, which has been a contentious issue (Rohter 2006). Chilotes have a very strong sense of identity and independence. In my experience they very rarely think of themselves as Chileans, even though they have been under the Chilean state since the 1800s. They have maintained a consciousness of and physical independence from the mainland and this is a source of pride.[19] Even the smaller islands in the archipelago have an independence from the grand island of Chiloé—they do not consider themselves Chilotes but rather people of their own island.

Arturo's experience with "healthy islands" comes as an administrator of health; his take on the "healthy islands" concept was that it is an unachievable "utopia." It is a sentiment I agree with. This is certainly the case when we consider the health of island populations and their ecosystems today. Ana, a member of the WCC health team felt that the concept of "healthy islands" did not exist today for Chiloé:

> Already it is not the healthy life as 40 years ago, everything that has come, the technology, on one hand it is good, but also on the other hand it has been changing very much the mentality of the people, of the young people . . . all of the bad habits, the food on one side, for the other side, the drugs, the alcohol, this is very strong now . . . But mostly it is alcohol, and this has been making a lot of people ill, psychologically and also the people have been losing their customs, they have taken others [custom] that came from outside and this has made us bad.

These sentiments were duplicated by Josefina who saw Chiloé more as a dystopia: "the island is not healthy, it is polluted, if I talk about a healthy island in the terms of the sea, the land, the physical part, we are not healthy, the salmon farms left a disaster." As a therapist with the Williche health team, Josefina has seen many ill effects from aquaculture industry.

In summary, for those involved with health care across the three different ethnographic sites in Chiloé, "healthy islands" should be: (1) places where everyone has access to health care and the tools for self-care; (2) where a balance is maintained with their environment, their culture, and community; (3) where people are happy to live and stay; (4) where islanders have control over the development of the island; (5) and where outside influences seen negatively such as alcohol, drugs and salmon farms are limited. The definition presented in Chiloé is personal and specific to life on in this archipelago, yet we need to be cautious of the culturally specific. I do not mean to set this definition in stone; it is representative of a certain group of people—those involved with health care—in 2010 and contextualized in the recent aftermath of aquaculture. It is a snapshot of a particular view—a partial truth (Clifford 1986a). Nevertheless, there is room for a comparison between this definition of relational health, and that of the institutional definition in the South Pacific. The only similarity between these two versions is that of ecological balance, with a concern over the health of the ocean. In this sense then, a "healthy island" "enacted is more than one—but less than many" (Mol 2002:55). It is important to question how Pacific Islanders may have defined "healthy islands" outside of the Ministers of health meetings, within each sub-region, and within each island or archipelago. Perhaps the answer(s) would be similar to those in Chiloé, and unlike the universalized, bureaucratic formulation given in 1995.

Concern with the portrayal of "healthy islands" as a universal category is an extension of the construction of islands as attainable, defined object(s). This is problematic as the "mission of the universal is to form bridges, roads and channels of circulation. Knowledge gained from *particular* experience percolates into these channels,

widening rather than interrupting them" (Tsing 2005:7, emphasis added). With the widening of a particular "expert knowledge," the relationship of power–knowledge gains strength and movement (Foucault 1995). Over the years "healthy islands" policy has become an expert knowledge: the answer to health promotion and protection in Oceania. However, we cannot forget the link of this universal to European colonial power. One particular experience common to South Pacific Islands and Chiloé was colonialism (performed by various countries). Colonial health policy and biomedical technologies were pre-existing in these islands before 1995, as I have shown. Moreover, the non-small island states involved in the "healthy islands" meetings were at one point in time, in one shape or another, also colonizers. So how does the local island voice gain strength inside the "healthy islands" agenda? Is it perhaps even needed? Rod Edmond and Vanessa Smith remind us that:

> In contemporary cultural discourses of the west, islands often represent sites of cultural stagnation . . . Isolation, once conceived of as enabling, has come to be thought of as disabling, damagingly cut off from modernity rather than a utopian alternative to it. . . . The islands of Polynesia and Micronesia are regarded, not least by their indigenous elites, as too small, poor and isolated to survive without near-total dependence on the largesse of wealthy nations. (2003:8–9)

This makes me wonder who will gain from the implementation of "healthy islands" policy. How helpful are these policies to solving local health concerns that are also influenced by globalization? Does the development of "healthy islands" policy expand the North's reach of globalization and modernization (Harding 2008)? Uniting South Pacific Islands for the sake of health promotion and protection can facilitate—intentionally or not—"surveillance and intervention" under "healthy islands" policy (Thomas 1994:107).

Economic Systems and the Increase in Noncommunicable Diseases

In the introduction I referred to the work of Don Nutbeam (1996) and his claim that the links between health, the economy and environment are clearer on islands. In this section I bring together cases that exemplify Nutbeam's point. As the economy is quite a large topic, I focus on recent changes with capitalism which

> In the last two decades of the twentieth century, . . . was transformed by the establishment of new international rules of trade that offered tremendous advantages for the world's most powerful corporations. . . . Free-trade zones and new technologies of communication encouraged companies to spread their operations to ever-cheaper locations. . . . Privatization initiatives and free-trade regulations dismantled national economies, making once-public resources available for private appropriation (Tsing 2005:11–12)

Through the enactments of resource extraction and neoliberal economic policy (including free trade agreements and multi-national industries) I show how economic development has contributed to the rise of NCD as well as the difficulty of implementing "healthy islands" policy.

I draw heavily from the WHO reports on the "healthy islands" meetings and my fieldwork. As previously mentioned, the meeting of Ministers of Health in 1995 was convened "in response to the rapidly changing social and economic conditions in Pacific island countries and the effect of these changes on the quality of life and health status" (WHO 1997:3). This statement encouraged me to further explore the link between economy and health on islands.

What I learned from reviewing the "healthy islands" reports is that the challenges to achieving a "healthy island" are not solely contained within the island's geographical boundaries. These boundaries are indeed permeable (Baldacchino 2007), and the cause of the problem is not always endemic to the island—or the individual body (Scheper-

Hughes and Lock 1987). For example, during the 2001 meeting of the Ministers of Health, it was stated: "The international community should review studies of the impact of world trade and environmental policies on the health of island communities and ensure consistency of these global agreements with the safety and wellbeing of these populations" (WHO 2001b:21). In the following sub-sections I offer my interpretation of this request, focusing on the enactments of capitalism I have discovered in the islands of interest: resource extraction, free trade agreements and aquaculture industry.

Island of Nauru: A Tale of Phosphate and Canned Food

Within nissological discourse, the island of Nauru has received a lot of attention.[20] It could be called a classic case of resource extraction and underdevelopment, being comparable to Easter Island. The reason I have focused on Nauru is because I feel it gives a historical picture to the rise of NCD in relation to economic changes. This happened in Nauru well before other islands in Oceania; it also occurred before the spread of free trade. At just over 21 square kilometres, Nauru is the one of the smallest states in the world and infamously referred to as a "failed state" (Connell 2006), or a "doomed island" (Kendall 2009). An island in Oceania, located in the region of Micronesia, Nauru faced several challenges that are common to many small islands, such as: "small populations and markets, costly transportation, few skills, minimal resources and dependence on external services (banks, tertiary education, etc)—all amplified on a tiny island on the equator, where even water has been imported" (Connell 2006:60).

Fortunately, Nauru was rich in one major resource: phosphate. Over the course of Nauru's phosphate mining, several countries were involved including Germany in the

early nineteenth century, then the United Kingdom, Australia, and New Zealand after WWI under the British Phosphate Corporation (BPC) (Wikipedia 2013). By 1967, Nauru had full control over the mining, which led to state independence a year later as it was believed this economic development would sustain the state (Connell 2006). And the mining did provide development, however, this modernization of Nauruan's way of life also attributed to Nauru's title of being a "land of widows" (Connell 2006:51).

For a time, the economic picture presented Nauru as a utopian island. Yet as early as 1914, E. G. Hambruch (Connell) made the observation that "Nauru has become an industrial area and sacrificed its phosphate, its environment, its people, animals and plants on the altar of industrialization" (2006:49). The economic boom negatively influenced both the environment (Stephen 2011) and health (Khambalia et al. 2011). Ill health in Nauru increased dramatically due to noncommunicable diseases such as diabetes, hypertension (high blood pressure), cardiovascular (heart) disease, and cerebrovascular (brain) disease; in addition to "alcohol-related motor vehicle accidents" and various cancers (Lewis and Rapaport 1995:220). Interestingly, during its heyday of phosphate mining the government of Nauru offered free health care and education. Which begs the question: With free health care in place, how did the health of its citizens become so poor?

The combination of changes in livelihoods and diet related to Nauru's "resource curse" help to answer this question. Nauru already had problems with food security due to drought and finicky fishing grounds. This "fragility and monotony of the diet resulted in a ready acceptance of cash and the purchase of store goods, so that even by the 1930s there was very limited interest in agriculture" (Connell 2006:49). The drop in local food

production, an affluent way of life that did not require Nauruans to work or pursue education, and dependence on imported food all occurred by the 1950s (Lewis and Rapaport 1995:220). Therefore, the mining profits brought not only canned food but also a decrease in physical activity (due in part to luxuries such as cars and televisions). These changes in Nauruan's way of life are blamed for the rise of NCD, which occurred relatively quickly: "In the early twentieth century, diabetes was virtually absent among native Nauruans; by the 1950s there was a steady increase of diabetes . . . Similarly, hypertension and cardiovascular disease were rare on Nauru up to the 1960s, but beginning in the 1970s there was a steady increase in both conditions" (Lewis and Rapaport 1995:220).

Nauru could not keep going at the same pace forever and the phosphate did run out in the 2000s (Connell 2006). A combination of severe illnesses and financial mismanagement meant Nauru could not afford its health care. In the early 2000s it had run "up unpaid medical debts of more than A$1 million in Australia (mainly for the treatment of diabetes-related problems)" (Connell 2006:58). More recently the rates of NCD have dropped on the global level, but Nauruans still have some of the highest percentages: in 2008 the estimated prevalence for overweight was at 92.9% and obesity was at 71.7%; as of 2010, 70% of all deaths in Nauru were attributed to NCD in a population of 10,255 people (WHO 2011a).

The lesson from Nauru, as Garry Egger argues, is that we need to consider "the role of economic growth—beyond a point euphemistically defined as a 'sweet spot'—as a significant distal driver behind the development of high population levels of obesity and chronic disease, as well as potentiating factors for climate change" (2011:1). The story of

Nauru is unique, certain conditions led to the current state of poor health. Yet Nauru is not alone in the sea of NCD epidemics. As noted in the introduction, many other South Pacific Islands also have globally high rates of NCD. I will now explore some of the ways this has occurred.

Frictions of Trade, Food Supply, and Health

During the seventh meeting of the Ministers of Health it was confirmed, "many social and economic influences on the health of Pacific people are beyond the control of national governments. Trade, especially food, tobacco and alcohol imports, . . . are of particular concern" (WHO 2007:5). This is startling considering much of the health burdens plaguing Oceania are directly related to the consumption of imported food, tobacco, and alcohol. The role of national governments is decreased under neoliberal economies; simultaneously these states are under global pressure to open their borders even further to trade (Tsing 2005). As Stewart Firth notes: "The global move from protection to free trade has reached the Pacific Islands. . . . Island countries are *seeking to reassure aid donors* and the institutions of global governance that they are adapting to the new global trading order" (2007:113, emphasis added). Trade agreements such as the Pacific Agreement on Closer Economic Relations (PACER), tie small Pacific Island countries to free trade agreements "dominated by Australia and New Zealand" (Firth 2007:114). These agreements will change the economies, and consequently the health of both the people and the environment. It is also important to consider what trade agreements such as PACER mean for an island's sovereignty. If governments are already experiencing difficulty in controlling imports (especially those linked to poor health),

how much jurisdiction can they maintain with Australia and New Zealand at their doorstep, bringing neoliberal economic policies with them?

After examining the "healthy islands" reports it was apparent that the concern over tobacco manufacturing, use of tobacco and its health risks, was directly tied to "frictions" of trade (Tsing 2005). One initiative of "healthy islands" policy is to support WHO's Framework Convention for Tobacco Control (FCTC). It is suggested that countries should harmonize efforts "across the Pacific islands community to ensure that tobacco consumption is effectively reduced and the risks from tobacco use minimized" (WHO 2003:6).[21] Paradoxically, the opening of borders to trade has complicated some countries' connections with tobacco companies. A reduction in tobacco use may harm the economies of some island states because "revenues were derived in part from the production and/or manufacturing of tobacco" (WHO 2003:6). This is the case for Samoa whose government "approved the establishment of a cigarette manufacturing company from China, and mentioned the impact of Samoa's membership in the World Trade Organization which involves opening up its market to foreign tobacco manufacturers" (WHO 2003:6). Governments are caught in a catch 22. They *need* to show aid donors they are supportive of the global economy and free trade (which includes tobacco manufacturing on islands), and at the same time, work towards reducing tobacco consumption and promote healthy lifestyles.

Aihwa Ong argues, "neoliberalism is reconfiguring relationships between governing and the governed, power and knowledge, and sovereignty and territoriality" (2006:3). An example of how neoliberal economic policies achieve this can be found in the South Pacific with food importation. The impact of trade has reconfigured food

importation as “import companies often are controlled by influential people in the Pacific. Governments have difficulty in controlling the flow of unhealthy food into their countries” (WHO 2007:6). Private companies have power over citizens through their control of food supply. As of 2009, it was reported that “all Pacific island countries and areas have some dependency on imported foods, and in many, imported foods make up over 50% of all foods consumed” (WHO 2009:4). This then changes the relationship between the governed and the governing: on one hand the government is concerned about the rise of NCD and expects islanders to control their consumption of foods high in fat, salt, and sugar—without controlling their importation. On the other hand, islanders look to the government for accessible food staples and health care.

A reliance on imported food in Oceania is a concern for domestic food supply and what this means for an island’s economy, environment, and health. Food security has been ensured in Pacific Island states “through domestic food production and importation. However, a change in the balance between these two sources of food supply, coupled with challenging external factors, is affecting and will increasingly affect the capacity of Pacific island countries and areas to meet their food needs”(WHO 2009:4).[22] Moreover, global markets affect imported food costs as was shown in 2008 “when global food prices increased by 83%” (WHO 2009:4). Domestic food supply is also influenced by population shifts where “knowledge of traditional farming practices and food preparation techniques is being lost” as rural communities lose members to urban centres (WHO 2009:4). This event is also quite common in Chiloé and related to changes in subsistence living.

Rural areas today are not excluded from the appeal of imported foods where local foods "are being replaced by imports, . . . preferred for their longer shelf-life and convenience but often high in salt, fat or sugar and low in nutritional value" (WHO 2009:4). With an increase in imported food consumption comes an increase in NCD. The combination of these illnesses, increasing cost and dependence of imported foods, and decrease in local farming knowledge paints a very bleak picture for future island generations. And while Nauru is an extreme case, it is a perfect example of the dangers involved with a high reliance on imported foods. I have to wonder what the future holds for South Pacific islands. Can they learn from Nauru, which is now trying to provide a local food supply to its citizens by undergoing educational programs in gardening and banana growing (Kendall 2009). As neoliberal economic policies decrease government control of imports, it is important to consider how this will influence an island's future capacity to feed their populations.

Salmon of the Islands: Aquaculture Industry and Infectious Salmon Anaemia Virus

> Healthy lifestyles are being eroded,
> and an unhealthy environment complicates issues further.
>
> —World Health Organization 2003:9

The importance of the connection between islanders and the ocean is undeniable as discussed in Epeli Hau'ofa's *Our Sea of Islands*. The sea provides a means of travel, food, play, relationships, spirituality, access and insulation.[23] As island and coastal mainland communities are dependant on the sea, changes in the ocean have a lasting impact on the way of life, health, and economies of these populations. The role of the

ocean in relation to human health was highlighted during the third bi-annual "healthy islands" meeting: "The ocean that surrounds Pacific island countries is an inseparable part of islanders' life. If it is degraded, this will have adverse effects on health" (WHO 1999:3). The link between environmental health and human health is a discussion too large for this thesis. Nevertheless, I explore this area briefly through the impact of salmon farms in Chiloé to further understand what it means to be healthy there. The aquaculture industry was not a direct area of my fieldwork, but as the topic was so present in the daily lives of Chilotes and frequently commented upon, it became an unanticipated area of interest. The case of *salmoneras* [salmon farms] highlights how industrialization influences the economy, health, and environment.

As I have noted, various facets of globalization impact the health, economy, and local ecosystems in a number of ways, which are visible on islands. Each island is its own locale, with specific health concerns, economies, natural resources, and ecosystem. Even though there is uniqueness to each island (including those in an archipelago), global assemblages may produce similar changes (Ong and Collier 2005). World trade is now heavily influenced by neoliberalism, which can refer "to a set of ideologies and practices, particularly at the level of national government policy, designed to facilitate or enforce the intensification and expansion of capitalist markets and trade" (Hayden 2003:48). Transformations of world trade have been felt on Chiloé Island, with aquaculture as an industrial driving force to grow cheap food for elsewhere (which often has European packaging).

The case of Chiloé shows that state policies can be just as detrimental as the actions of international companies, and in some cases the state and industry act in tandem

(Tsing 2005). Salmon farming started in Chile under the military dictatorship of Pinochet (1973–1990). Gene Barrett, Mauricio Caniggia, and Lorna Read explain how this regime influenced industry as salmon farming "occurred in the context of neoliberal free trade policies and deregulation in the capture fishery. . . . Privatization, industrialization and the concentration of ownership led to over expansion and over capitalization in the industry" (2002:1954). For *foreign* companies, the combination of Chiloé's environmental conditions and the state's neoliberal policies was a gold mine. Especially as "Pinochet's military dictatorship repressed workers' associations and made labor organization illegal. The aquaculture industry was able to develop in southern Chile from the early 1980s onwards without a significant union movement to press workers' claims, and benefited from exploitative practices and low wages" (Oseland et al. 2012:94). In spite of aquaculture's contribution to a prosperous GDP, it has created adverse effects on local communities.

The discussion on the rise of NCD in Oceania is apparent on other islands as well. Chiloé too suffers from the "double burden" of communicable and NCD. Drastic changes in the social, economic, and environmental fabric of the island have altered the quality of life. As was mentioned in the section on defining "healthy islands" in Chiloé, the islands are perceived as being unhealthy—referring to both human and ecosystem health—with the salmon farm industry shouldering much of the blame. Pedro, a member of the Williche Council of Chiefs explained to me that many of the changes in illnesses on the island "are associated with the change due to the salmon industry, there is much more depression. Today we have problems of poor nutrition, we have kidney problems, in short, there is a series of problems that have come and happened from the change of

habits produced by *salmoneras* that did not exist 20 years ago." One study on the effects of this industry in Chiloé expressed concern over the health and safety of workers in the *salmoneras* with no access to washrooms for women on the salmon cages, at times no chairs in the plants and "an antifouling paint which is applied to the salmon cage nets" that led to lung problems (Barrett et al. 2002:1958).

In order to understand the complexity of the impact of the *salmoneras* on the economy, one needs to consider the history of labour in the archipelago. The economy was (and still is to a certain extent) largely based on subsistence living: "For centuries local subsistence based on fisher-farmer households contributed to a largely self-sufficient island economy. The new industrialism, combined with the decline of traditional pursuits, has led to the abandonment of a traditional economy by the young" (Barrett et al. 2002:1953). This abandonment meant that islanders became increasingly dependent upon the new economy of wage labour. For some, the employment in aquaculture was welcomed as it "brought with it the opportunity for employment (irregular or not) within the community. In the past, the male head of the household had to migrate to the mainland or Argentina for seasonal (salaried) work, leaving the household and farm to the women and children" (Barrett et al. 2002:1961). With men being able to find work within the archipelago it meant that they were home more often. However, I was also witness to conversations on salmon farms where some islanders felt they were losing their youth to the industry. Benefits to the influx of workers included "improved access to transportation, education and health services" (Vazques and Novaczek 2010:11). In some communities new roads and wharfs were put in to increase

shore access. However, the benefits were short lived as the poor conditions in which the salmon cages were kept led to the spread of the infectious salmon anaemia (ISA) virus.

The epidemic of the ISA virus brought an investigation into the salmon farming practices in Chile as noted by Barrionuevo in a *New York Times* article, opening "companies to fresh charges from biologists and environmentalists who say that the breeding of salmon in crowded underwater pens is contaminating once-pristine waters and producing potentially unhealthy fish" (March 27, 2008). In an article written before the spread of the virus, attention was called to harmful effects from this industry including the "contamination that results from the fallowing system used by salmon farms in Chile. The relative unavailability of vaccines and expense of antibiotics means that rather than active prevention of disease or treatment of infected fish within existing cages and sites, the site is abandoned and diseased fish are left behind" (Barrett et al. 2002:1960). With little regulatory enforcement from the state, international companies were not concerned with the level of environmental degradation they were causing.

Between 2007 and 2010, I have had many discussions about salmon farms with Chilotes, in which people have continuously mentioned the harmful effects it has on the local environment. Various marine resources used in daily diets such as seaweeds and shellfish were often polluted by the waste from the salmon, which also caused high quantities of nitrogen in the water. Gene Barrett et al. summarized the seriousness of the situation in the early 2000s:

> The residual marine contamination has destroyed algae and the shellfish resources both which were formerly an important source of cash income as well as an element in their local diet. People in the communities of Tenaun and Isla Cailin observed that the feed used in the salmon cages escapes into the surrounding environment and other traditional food species such as shellfish and hake feed on

> it. The result is that the look and taste of the fish that eat this food has changed noticeably. (2002:1962)

Additionally, the physical spaces that the salmon and mussel farms consumed made both sea travel and harvesting difficult, if not impossible, for locales in the area. Aquaculture in general has meant a loss of local food supply in the archipelago, which many costal communities were dependent upon. The importance of this is that aquaculture production has reduced the ability to harvest locally for free.

Amongst the people I spoke with, *salmoneras* and the aftermath of its collapse were blamed for fragmenting communities and families, the migration from some of the smaller islands to the big island, massive pollution both from the biological products associated with salmon (food and waste) and material waste (empty feed bags, equipment), an influx of "outsiders" that is seen to have led to the increase of alcohol–drug use and prostitution, and a high unemployment rate.

When the ISA virus began to spread, first found in Chiloé in 2007, "the aquaculture industry had approximately 30,000 directly employed workers, and some 50,000 employed indirectly. Several more salmon farms were affected that year, and even more farms in 2008. . . . It was estimated that, in May 2010, 20,000 workers had lost their jobs" (Oseland et al. 2012:100). Given that the Chiloé archipelago "accounts for the vast majority of aquaculture production in Chile, notably 100% of Atlantic salmon production," the majority of the labour loss affected this population (Barrett et al. 2002:1954). The gravity of the unemployment rate is understood in the context of livelihood changes Chilotes underwent with the introduction of wage labour jobs provided by the aquaculture industry. Carlos, a member of the Williche Council of Chiefs, noted that when the salmon farms collapsed it left "a lot unemployed and a sick

population at the same time, because the families became accustomed to generating economic resources and today there isn't a monthly salary, then the people ask themselves: 'what do we do now?'" It is no surprise then that depression is one of the more common NCD in Chiloé. Even though there are no studies showing a direct correlation between the aftermath of the *salmonaras*—loss of employment, reduction in local food supply and degradation of the ecosystem—and the increase of depression among other NCD in Chiloé, the connection is visible when one spends time in the archipelago.

Conclusion

Exploring health concerns on islands in Oceania and Chile illuminated the work of Don Nutbeam and uncovered the pattern of increases in NCD. This growth is problematized through the examination of how global assemblages such as colonialism and neoliberalism contribute to the state of health and health care on islands. When we look at how the economy, environment, and health are interrelated on islands we see specificity and patterns, global actions, and local results. The phenomena among these similarities are that Chiloé and South Pacific Islands do have different ethnicities, different experiences with colonialism, different climates and ecosystems (Quammen 1996). Yet they are both plagued by the rise of NCD. Why? Diabetes and obesity, for example, are not only a result of bad eating habits or a sedentary lifestyle, they are also caused by poverty, historical trauma and "by a complex interaction of global economic forces affecting the food and agricultural industries with changing local standards of living and ideas about the good life" (Lock and Nguyen 2010:169). The repeated pattern

that I have noticed on islands is that global forms (e.g. enactments of western ideals of modernity, capitalism, science, progress, rationality, etc.) can have a negative effect on populations. The effect has also occurred on many non-island colonized places, but they are not the focus of this thesis.

The spread and duration of the population decline in the South Pacific during colonial rule can been seen more clearly today as a direct relation to both the illnesses that Europeans brought as well as the policies they enforced. Many national policies on health care have been shaped and continue to be moulded by colonialism and current global actors. As far as the health of Pacific Islanders and the policy that pertains to health care are concerned, not much has changed since colonial times. Islanders' health continues to be affected; at first it was small pox, measles and other European illnesses. Today it is the double burden with a re-emergence and spread of European-based and "tropical" diseases, in addition to diseases of "modernity." Colonialism swept over the South Pacific and by 1900 "every island in Oceania had come under foreign colonial rule, through destabilization and cession or out-right conquest" (Chappell 1999:138). Many of these islands stayed colonized roughly until the 1970s (Chappell 1999). Even once countries reached independence, and not all have as of 2013, ties were not completely severed with their former colonizer. New connections with global organizations have been made. The policies to emerge out of the "healthy islands" discourse promote the utopian ideal of the island and yet rely on the notion that islands must be engaged with wealthier nations and organizations in order to survive.

Through my analysis of the "healthy islands" meeting reports and island studies literature, it was apparent that neoliberal economic policies, along with practices of

commodification, impede an island's ability to control imports and therefore add another level of difficulty with the implementation of "healthy islands" policy. The profile of salmon farming in Chiloé highlighted how this industry has severely affected the economy, health, and environment in the archipelago. Nevertheless, the profits of aquaculture mean that "international development agencies and state and local governments still herald aquaculture as a means of economic development, resource diversification, and food security, and some scientists argue that it can be a strategy for taking the pressure off of wild fish stocks in order for them to recover" (Pitchon 2011:207). While Chiloé may be free at the moment from the salmon industry due to the spread of the ISA virus, it in no way guarantees the prevention of this or other large foreign industries returning to the area.

At this point I would like to return to Nicholas Thomas' work and his argument that colonial regulations imposed upon Pacific Islanders, under the name of health and sanitation, did not always have health and sanitation as their goal: "The underlying rationale of prohibitions and stipulations was not the prevention or imposition of specific practices because these really mattered in particular. Specification and regulation were rather ends in themselves, which constituted the ambit of state control" (1994:123-4). By controlling the "health" of the population, colonizers were able to influence and shape everyday practices. My analysis of the "healthy islands" situation (here and in chapter three) points to a continuation of colonial style control through the means of "development."

Previously it was the state that had the ambit of control, yet the current examples I gave from Oceania and Chile show that capitalist practices have altered this. In the South

Pacific, regulation of food importation has fallen out of the hands of the government and into private companies. In Chiloé, international companies took advantage of lax state policies on workers rights and environmental pollution. Neoliberal economic policies possess a new range of control over populations though economic development. Control over the economy is linked to individual health, yet international companies do not take responsibility for the ill health their products contribute towards. International companies are not alone in this as governments also ignore their responsibility. This is one example of how health is impacted by global assemblages.

In the following chapter I further explore how health policy and colonial enactments of biomedicine shape ontologies as practices of health and illness. The ways in which populations know health and ways of being healthy are not entirely organic. These concepts have been "universalized" with the approach of a biological paradigm (Bamford 2007). I present how the concepts of health, curing–healing and disease–illness are viewed from both European and Williche cosmologies. Epistemological and ontological questions are raised.

Notes

1. Epeli Hau'ofa (1993) prefers to use the term "Oceania" over South Pacific as he feels it connotes a more relational picture, as I agree with him I use both terms interchangeable.

2. Although Australia is technically an island, its size and political force align it more with continents than islands.

3. As this thesis is island centred I will not be comparing colonial practices on mainlands to islands.

4. Williams and Chrisman note that after the formal end of colonialism the term neo-colonialism was used by Marxists to refer to the West's unwillingness to relinquish control (1994:3).

5. Annemarie Mol suggests that as long as ethnographers are studying how disease or in this case health are "done," then the story is one of the practices of doing health—it is a praxiography (2002:31).

6. Paul Farmer notes that these so called "tropical" diseases "predominantly affect the poor; the groups at risk for these diseases are often bounded more by socioeconomic status than by latitude" (2010:86).

7. Enabling violations, according to Gayatri Spivak, provide imperialism and "development" with an alibi; as she explains: the colonization of India cannot be justified by current railroads and an English speaking population (Spivak 1998:332–333).

8. Allen illustrated (Denoon) this in New Guinea where "the village environment favoured the reproduction and spread of pathogens which selectively killed children and weaker adults" (1997:116).

9. Alexandra Widmer's work adds to this point by noting that ni-Vanuatu islanders' cultural practices were viewed as being in the past and therefore "incompatible with biomedical rationales" (2010:63).

10. Jean Comaroff notes this was also present in South Africa with the "'sanitation syndrome' —a preoccupation with infectious disease that shaped nationwide policies and practices of racial segregation" (1993:321).

11. Margaret Lock and Vinh-Kim Nguyen note that the biomedical approach towards the human body "was entangled with the formation of the modern state and its concern to produce a fit workforce in order to enable the twin processes of modernization and colonization so central to the political economy of the 19th century" (2010:82). The ability to have a fit workforce was central to colonial health policy. If the body is fit then it can produce.

12. This meeting was preceded by a two and a half day working group of Permanent Secretaries–Directors who outlined the discussion and recommendations of the Ministers meeting. During the Ministers meeting there were "observers from Australia, France, Japan, New Zealand, United States of America, regional organizations and United Nations agencies" (WHO 1995:4). It is unclear how much influence these states and organizations had in policy development.

13. As of February 2013 a final report from the 2011 meeting was not available; I have not included any information from the 2011 meeting in my analysis.

14. Formally known as the South Pacific Commission, it was founded in 1947 in Australia. For more information about the SPC see: http://www.spc.int/

15. American Samoa, Cook Islands, Fiji, French Polynesia, Guam, Kiribati, Commonwealth of the Mariana Islands, Republic of Marshall Islands, Federated States of Micronesia, Republic of Nauru, New Caledonia, Niue, Republic of Palau, Papua New Guinea, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu, Vanuatu, with Wallis and Futuna.

16. While the original definition is in the 1995 meeting report, it was revised in 2001 to include the addition of the ocean being protected.

17. Also known as elephantiasis, it is commonly spread through mosquitos that carry the parasite. See http://www.who.int/mediacentre/factsheets/fs102/en/

18. International Health Regulations (IHR) is a legally binding framework established to prevent international health emergencies, implemented by the World Health Organization (WHO 2013), with the approach of "avoiding unnecessary interference with international traffic and trade" (WHO 2007:8). During the sixth meeting of the Ministers of Health the following concerns with IHR regulations were noted: "Most Pacific Island countries and territories do not have sufficient infrastructure such as laboratory capacity or skilled personnel to implement the revised IHR. It is not a feasible goal to establish such capacity within a target timeframe in many of the Pacific island countries and territories" (WHO, 2005: 12).

19. Rohter (2006) has likened Chiloé's independence to that of Newfoundland, Canada.

20. Godfrey Baldacchino's edited collection, *A World of Islands* (2007), contains several chapters that reference Nauru.

21. To learn more about this international treaty see: http://www.who.int/fctc/en/

22. Food security across the South Pacific varies by island; it is a vast area with great diversity and complexity.

23. The use of the term insularity is opposed by some island studies scholars as it is said to come with “semantic baggage of separation and backwardness” (Baldacchino 2004:272). However islands can also be a form of insulation through their “resilience and versatility”(Hay 2006:22)—protecting a population from outside forces, such as communicable diseases and extreme exploitation of natural resources.

CHAPTER TWO

In chapter one, I highlighted how global assemblages influence the connection between the economy, environment, and health. However, I did not elaborate on the multiplicity that health *is* (Mol 2002). Some may feel this is unnecessary as health has a global understanding, or at least a definition provided by the World Health Organization. Yet by now, the reader is aware that this thesis is not just concerned with the global, but also the local, and the interrelatedness between them. It is the "awkward," "unequal," and "unstable" interconnections across local and global ontologies and epistemologies of health, sickness, and healing that are explored in this chapter (Tsing 2005:4).

Ontological practices are not organic; they are shaped and circulated through expert knowledges. The knowledges examined here are those of the local–global. Some knowledge can be portrayed as a universal solid concept that is promoted on a global level, where knowledge of the culturally specific is localized. As noted in chapter one, this form of categorization is problematic: It was created under colonial "expert" knowledge, "that is, knowledge that legitimates the superiority of the West as defined against its Others" (Tsing 2005:1). Even though post-colonial and anthropological scholars are concerned with this local–global dichotomy, it is still practiced and therefore a useful way to examine the culturally constructed relationship between indigenous healing systems (dispersed locally) and biomedical systems (dispersed globally). For this discussion, the "universal" is akin to biomedical technologies with cultural specificity being a combination of Williche–Chilote conceptions of health. I am interested in whether or not there can be balance between these expert knowledges and how this relationship informs the praxis of health care. I will also show that there are imbalances

within this relationship as biomedical systems may be portrayed as a universal. However, it is indeed a part of the cultural system specific to European and North American sciences (Bamford 2007; Waldram 2000; Lock and Nguyen 2010). Biomedicine also has a global reach including Asia and South America.

Practices associated with wellness and illness are culturally informed by expert knowledges through the social bodies' actions. The importance of health is all around us. We are told to strive to achieve a healthy state—physically, mentally, emotionally and spiritually. But what is health? Is it more than just the absence of disease or illness? Yes. In 2013, health can encompass well-being, in vitro fertilization, immunizations, vaccines, stem cell research, antiretroviral therapy, clean drinking water and air, shelter, physical activity, mental stability, or living in a home free of abuse. The importance of health is multiple, as the idea of health itself is multiple (Mol 2002). However, ontologies and praxis of health care are not strung out horizontally—within one state let alone the globe—they are categorized one on top of the other, one implying its importance over the other (King 2002). This implication is problematic because there is not one system that is better than another, they meet different needs.

Investigating the conceptual side of health, disease–illness, and curing–healing reveals an interesting disjunction between the "universal" and the "culturally specific." It is a place of "friction" enacted in the Chiloé archipelago (Tsing 2005). While there are "universal"—read biomedical—ideas around what health, sickness, and healing are, they are interpreted, embodied, understood, and enacted in a multiplicity of local ways. I draw heavily on the work of Annemarie Mol as her understanding of these multiplicities is helpful: "*Ontology* is not given in the order of things, but that, instead, *ontologies* are

brought into being, sustained, or allowed to wither away in common, day-to-day, sociomaterial practices" (2002:6). To become healthy or sick is achieved differently through time, space, and place (Fabian 2002; Soja 1995). In order to become ill or healthy one needs to know how to do so; these rules are tied into the social and cultural fabric of each locale, with global and local circulations of knowledge shaping them.

In this chapter, health care ontologies (health, disease–illness, and curing–healing) are presented from both a "universal," and "specific" position. I look at how biomedical notions—informed by Western science discourse—intersect with Williche–Chilote health care ontologies. Learning of Williche–Chilote practices and knowledge of health exposed how biomedicine privileges the individual biological body as the site of health and sickness, excluding the role of the social body and the body politic (Scheper-Hughes and Lock 1987). This exclusion has been critiqued because biomedicine "missed identification between the individual and the social bodies, and [has] a tendency to transform the social into the biological" (Scheper-Hughes and Lock 1987:10). This transformation explains disease etiologies and treatments as biological matter and excludes the social aspect of illness and healing, along with non-biomedical technologies such as reiki (energy therapy). There is an imbalance between a socio-centric approach and a biological paradigm (Bamford 2007). The importance of including the social, mental, and spiritual, along with biological aspects became apparent to me through the fieldwork, personal experiences, and literature on the topic.[1]

In order to understand how ontologies of health, disease, and healing exist throughout global and local levels, a brief examination of the systems that circulate these knowledges is needed. Health care systems based on the biomedical model present a

narrowed and *culturally specific* view of what health means, what disease aetiologies can be and how one is able to heal (Burri and Dumit 2007; Tanner 2007). There can also be a globality to indigenous healing systems as an "international indigenism" has evolved on the world policy stage (Niezen 2003).

This chapter is also about exploring whether or not there can be balance. This theme runs throughout the thesis; here I explain how the concept of balance permeates across the three field-sites in Chiloé when looking at what health, sickness, and healing *are* (referring to Mol's work on a situated *is*). I ask if balance can be essentialized, can it help bridge these expert knowledges in Chiloé, these islands of medicine?

Two Healing Systems, One Archipelago

There is an imbalance in the ways health care ontologies are constructed globally (biomedically) and locally ("traditionally").[2] Of course, this particular construction is from the Euro-American perspective where local medicine is "traditional." While the health system in a certain locale, for example Chiloé, may use "indigenous ancestral medicine," it is specific to the culture, climate and ecosystem of a particular place, with its own history, epistemology, and ontology. What is interesting is how these systems become expert knowledges, and how they circulate knowledge both on the global and locale level.

European conceptions of science have been present in Chile for almost 500 years; they arrived in the16th century with Spanish conquistadors. And as Western (Euro-American) states are "intimately supportive" of the biomedical system, to the extent that it is their "official supplier of health services," so too are many colonized countries such

as Chile (Waldram 2000:617). Due to the partnership between the Chilean state and biomedical practices and technologies, localized ways of knowing and practicing health care are struggling for their own space and place. There is a clash between the two expert medical knowledges in Chiloé (further explored in chapter three). Before we question how this clash influences the accessibility of health care, I feel it is important to look at how these knowledges are formed and how they shape ontologies of health care.

From a post-colonial stance it is important to deconstruct the "universal" side (and often the upper hand) of this expert knowledge equation, which for this study is akin to biomedicine. As Peter J. Brown and Ron Barrett explain:

> Biomedicine is an ethnomedicine of Western culture. In a cultural sense, a medical system is an organized set of ideas referring to a particular healing tradition (e.g., Chinese, Ayurvedic, homeopathic, or biomedical). Medical anthropologists use the term biomedicine to refer to the tradition of scientific, biologically oriented methods of diagnosis and cure. (2010:102)

Biomedicine is a particular medical tradition; how it gained the upper hand is an historical question.

One of the emergent apparatuses of power in eighteenth century Europe was that of medicine, which "as a general technique of health even more than as a service to the sick or an art of cures, assumes an increasingly important place in the administrative system and the machinery of power . . . the doctor wins a footing within the different instances of social power" (Foucault 1984c:283). The power of medicine and "footing" gained by the doctor was spread through colonialism with health and sanitation policies (Thomas 1994). The area that I wish to draw attention to, is the effect this circulation of biomedical–colonial knowledge had and has on colonized populations.

Throughout the colonial era there was a "preoccupation with the transmission of medical knowledge between nation-states" (King 2002:779). This knowledge transmission deserves an analysis. In one sense it was done vertically as well as unidirectionally with European knowledge on top trying to drive out indigenous knowledge: "Europeans contrasted their own medicine and public health, symbolizing rationality and modernity, with putatively superstitious and primitive indigenous medical beliefs, which they denigrated and sought to eliminate as part of the larger 'civilizing mission' of colonialism" (King 2002:765). As current governments of colonizing nations and those once colonized support a biomedical system, there continues to be a denigration of indigenous health systems. As a result, it is extremely difficult for any non-biomedical system to gain state support where it is firmly embedded in the biomedical system.

Of interest is how early Euro-American botanical science, which "modern" medicine is based on, was informed by "other" knowledge (Tsing 2005).[3] (The importance of plant compounds for Euro-American drug development is expanded upon in chapter three.) The global classification of plants was possible due to non-European knowledge of the local plant species, namely that of Asians, Africans, and indigenous Americans (Tsing 2005). As Europeans were discovering "new worlds" they began to categorize, process and universalize this knowledge—claiming it as their own—and "refused to acknowledge this global sharing of knowledge" (Tsing 2005:93). I feel that this relationship is an example of Foucault's notion of power–knowledge where: "it is not the activity of the subject of knowledge that produces a corpus of knowledge, useful or resistant to power, but power–knowledge, the processes and struggles that traverse it and

of which it is made up, that determines the forms and possible domains of knowledge" (Foucault 1995:28). Europeans had a specific power–knowledge that allowed them to embark on "voyages of discovery," trade with the peoples they came across, subjugate them, and extract their knowledge. Europeans were then able to take this knowledge and categorize it, thereby redistributing it as "theirs." The refusal to acknowledge the contribution of non-European botanical knowledge simultaneously empowered Europeans and their colonial mission, while disempowering those they colonized. Consequently, "as European hegemony grew, European knowledge increasingly directed global programs" (Tsing 2005:94). European science became an expert knowledge with the abstraction of knowledge from those they colonized.

The dominance of colonialism—with its subsequent promise of modernization—facilitated the spread of biomedicine as a "universal" system. Since the eighteenth century, the role of medicine became increasing significant, so much so that from the 1960s onward, "biomedicine was emblematic of modernization, and newly independent states rushed to build hospitals and provide modern health care" (Lock and Nguyen 2010:160). Adding insult to injury is the current assumption "that the [biomedical] model is, or should be, appropriate to all other medical systems" (Waldram 2000:606). Even though biomedical technologies are practiced globally, they are not universally applied as each state has their own interests (Lock and Nguyen 2010). Still, there is a general biomedical approach to health which uses the "gaze," searching the body internally with microscopes, blood tests, x-rays, ultra sounds, etc (Lock and Nguyen 2010; Foucault 1991). It is the individual biological body that holds the attention of the "gaze" (Bamford 2007). When this approach is taken—narrowed, focused, exact—external health factors

are reduced or lost (Good and DelVecchio Good, 1993). Contrary to this is the recognition that the "dis-eased" body is not merely ill from pathogens, the social body and body politic also influence disease, as I have shown in chapter one. Yet the specific focus of biomedicine, especially in a neoliberal climate, creates a void in "seeing" how the social and body politic affect the health of individuals.

There is a danger in the dominance of "modern" medicine, that of acculturation; for example, biomedical practices can be seen as a form of neo-colonial domination (Lock and Nguyen 2010:62). In this sense biomedicine has become one of Spivak's (1998) "enabling violations"—just because biomedical medicines heal colonized people does not justify the discrediting of other healing technologies. Biomedicine's monopoly places or retains the control of global health in the hand of former colonizing powers (Crandon 1986; Adelson 2008). Even more so, "we should bear in mind that *our* epistemology is but one among many systems of knowledge regarding the relations held to obtain among mind, body, culture, nature, and society" (Scheper-Hughes and Lock 1987:11, emphasis added). By exploring other medical systems and ontologies we not only learn of possibilities, but also of the cultural specificity of Euro-American systems.

The second expert knowledge I will speak to is that of the "specific," the local, and in this case Williche–Chilote knowledge. I have no formal history of Williche health epistemologies to present; only what I learned from my time in Chiloé. Just as European cosmology shaped the theories and practices of biomedicine, Williche cosmology has influenced the Council's health program. The influence can be seen in the use of a *chafun* [a circle of conversation to solve problems], the practice of making individual needs the centre of attention, focusing on health as opposed to sickness, and in their

interdisciplinary, horizontal approach which allows them to use a variety of therapies. There is also the recognition of the importance of nature (clean environment), and most importantly, the ideology behind *Küme Mogen Rüpü*, discussed below.

The objectives of the Council's health program are as follows: (1) To encourage the self-care of the people's health; (2) To support and teach local health teams with the knowledge of Williche culture; (3) To offer health attention to the people and their families, based on complementary western and native therapies, to integrate original Williche therapies; (4) To enable professionals with the concept of intercultural and complementary health; (5) To contribute to the improved participation of organizations that are involved in health activities; and, (6) To contribute towards the improvement of public health by including these models. The Council's program takes a socio-centric approach to health, where the focus is not just on physical ailments but also includes emotional, spiritual, and mental aspects. The needs of the individual are put in the centre so that the therapies cater to these needs. Many ailments in Chiloé have a social etiology; in order to heal there needs to be a socio-centric approach.[4]

The Council's health program offers health attention in a variety of ways and uses a complementary methodology. With an interdisciplinary intercultural approach they offer the services of medical doctors, at times acupuncture, reflexology,[5] reike (Japanese energy therapy), and massage therapy. They use both Williche ancestral medicine and flower essence therapy in the style of Edward Bach (British) as remedies for healing. When I asked Pedro, a member of the WCC, about the range of healing techniques in the health program, he explained it this way:

> It does not matter who will give you healing, but what matters in this regard is that you heal, and in that sense, there is no competitive relationship between one

> system and another in the Williche community, because when there is an expert on algae that can help you, and another expert in bones that can help you, and another expert on plants that can help, or someone who does a ceremony that can help you, then go to one or go to all, there is a horizontal correlation between those who can help.

I would like to note that not all Williche accept the WCC's approach towards health care. Some do not agree with how the Council has integrated non-Williche therapies. In Chiloé, during the time of my fieldwork there were five Williche organizations that had some kind of a health centre or offered Williche therapies.[6] And, they did not all see eye to eye on how a Williche health program should look, as Arturo a health administrator explained:

> There are even deep divisions between the groups, between them there are differences of opinion, how should health be done, in fact the Council has incorporated therapies that are not considered to be used by the Williche, the original Mapuche, such as reiki, acupuncture, aromatherapy and others that the Mapuche never used and there are other groups and organizations here that are in complete disagreement with this.

This point shows that even the "specific" or local way of doing health cannot be essentialized. There is no one way to "do" health in Chiloé, however I can appreciate the Council's desire to promote the idea of an intercultural system that uses various therapies. That being said, what I present is a partial picture of how health can be viewed, across the three ethnographic sites.

From what I heard and learned in Chiloé, the backbone to the Williche health program was the concept of *Küme Mogen Rüpü (KMR)*. It is the name of their program and also their definition of health, as Ana, a Williche health team member said:

> The concept of KMR, which wants to say "a path for balance," . . . that this health program is working to achieve a way to balance the people; . . . Today we are sick for the imbalances that we have, for the lack of respect for the land, and for nature, which we have destroyed greatly. Then this KMR, it wants to say that we are waiting for well-being for the new generations, . . . and we are working for

> this . . . in order that once again we can return to balance as a person, mentally; and to be able to return to live, not like we did originally, but at least accepting the things, and the modernization. Always to have respect towards the earth.

This idea of balance has fluidity; it *circulates* throughout the ontologies of health, illness, and healing in Chiloé. It is not just the Council's health team who sees health care in terms of being in balance: more than one person from each ethnographic site congruently spoke about achieving balance. Through the remainder of this chapter I explore what health, illness and healing are on Chiloé and how both the Williche–Chilote and Euro-American systems shape these ontologies.

Health

As I earlier deconstructed the definition of "healthy islands" and am now exploring what health is on islands, I wanted to give a few examples of what health can mean to indigenous islanders. For Williche in the Chiloé archipelago health can be *Küme Mogen Rüpü*, [a path to balance]. For Tongans it is "mo-ui lelei – [which] has more to do with proper behavior in society than any limited medical application" (Capstick et al. 2009:1343). Laing and Mitaera (Capstick et al.) note that for Cook Islanders and Samoans health is "firmly embedded in the experience of being alive among kin" (2009:1343). In Fiji, Groth-Marnat (Capstick et al.) has found that individual health is "closely related to the overall sense of interpersonal harmony in the community" (2009:1343). There seems to be a common thread here of the importance of social relations. Many indigenous islanders have their own concepts of health, which fall outside of a biomedical paradigm and its universal definitions. The World Health Organization is a global "body politic," with an enormous reach, that defines health as:

"A state of complete physical, mental and social well-being, and not merely the absence of disease" (2012 Mental Health). I noted earlier that there is no one way to define health, however there are ontologies of health that are culturally relevant on the local level. Then there are those that are perceived to be bounded truths, circulating globally. What happens when the circulation of these ontologies meet, is a question to keep in mind throughout this chapter.

Chilotes' reality consists of social determinants of health, such as having a good quality of life—peace, quiet, happiness and contentment; social relationships; housing; and participating in local traditions and cultural events. Spiritual beliefs such as *sustos*, *mal de ojo* [the evil eye], and *brujerîa* [witchery] are also entwined with conceptions of health. The symbol of balance is very present in Chiloé; as the saying *Küme Mogen Rüpü* expresses, a person is with health when they are leading a balanced life. The following quotes summarize how health is thought about in Chiloé from the perspective of two health practitioners. Isabel, who works at one of the public health clinics looks at the multiplicity of health:

> In the theoretical part they are always telling you that it is physical well-being, emotional, I think they are quite right in the definition that WHO gives, but here the definition of health is different . . . as a general definition health should be the physical, emotional and spiritual well-being, many times the spiritual part is not considered in the definition, but here it is super strong, the spirituality of the people, here health has to do with the evil eye, with witches, with the Lawentuchefe [herbalist], with the Machi [spiritual healer] for the Mapuche.

And for Carolina, a therapist with the Williche Council of Chief's health program:

> Health is a broad concept that deals not only with being healthy physically, but to be healthy physically, mentally, emotionally and psychologically, . . . holistically, not only to look at the pain in the eye, or finger, or stomach; to see why the eye hurts, why the stomach hurts, I will look for the cause. If one is emotionally balanced, you will also be physically healthy, . . . We don't just see the health of the person, we see the health of the environment, living in a clean house, you have

> your yard clean, because all of this contributes to health, to not have violence, and for the marriage to stay well. Everything is part of health, it is not only to be healthy, for me health is much broader, it has to do with being fully human.

The topic of what health is not, was also raised in interviews: "it is not just as the textbooks say" (Isabel); for David, who works at one of the public clinics it is "not just the absence of disease"; and in response to using WHO's definition, Arturo, a health administrator feels: "we risk leaving a lot out." This speaks to the problem of implementing a "universal" definition of health; it cannot properly define health on all levels. Global health policy often falls into the trap of implementing a bounded definition of health. Then when health policy or health related concepts reach the local level they are adapted to fit the locale, or in some cases not at all.

The definition of health on Chiloé is distinct to its locale; it has been shaped by culture, geography, history, and environment. It is a combination of both biomedical and Williche–Chilote ideas of health and ways of knowing health. As Saltonstall notes (Adelson), health "is a constituted social reality, constructed through the medium of the body using the raw materials of social meaning and symbol" (2002:5). It is not just how health is constructed but also how it is practiced and evolves. After all, health is fluid, not static. When I first became involved with the Williche Council of Chief's health program in 2007, I was struck by their approach to health care and the concept of *Küme Mogen Rüpü*. For me, their definition of health has come to mean being in balance with your physical, emotional, spiritual, and mental self; it includes the relationships you have socially, spiritually and with your environment.

Health Care of the Self

I would like to focus the rest of this section exploring the ontologies and praxis of "self-care" as this term was used frequently in Chiloé when people spoke about health. I begin with Michel Foucault (1988) who has explored the development of Western knowledge about our selves, as humans, and refers to four "technologies" that have helped him to understand this: (1) production (2) sign systems (3) power (4) and, the self. The last of these, "technologies of the self" refers to a set of practices which:

> Permit individuals to effect by their *own means* or *with the help of others* a certain number of operations on their own bodies and souls, thoughts, conduct, and way of being, so as to *transform themselves* in order to attain a certain state of happiness, purity, wisdom, perfection, or immortality. (Foucault 1988:18, emphasis added)

The hermeneutics of self-care is an example of how "universal" and specific knowledges are circulated and meet in interesting and relevant ways. On the local level, at least seven of the seventeen people I interviewed (40%) spoke about the role of *autocuidado* [self-care] in reference to health care ontologies. The role of self-care in Chiloé is thought of in a relational sense; it focuses on individuals having the knowledge and tools to take care of themselves and others. On a global level I highlight Neoliberal and Christian ideologies of self-care; which frame self-care as a bounded individual responsibility (Foucault 1988; Ong 2006; Lock and Nguyen 2010).

The distinction between these different conceptions of self-care is murky; in some ways they oppose each other, yet they are interrelated. In order to have a better understanding of Western notions of self-care I turned to Foucault's (1988) work. He explains part of the reason for the murkiness I found between Western and Williche–Chilote notions of self-care: "a hermeneutics of the self has been diffused across Western

culture through numerous channels and integrated with various types of attitudes and experience so that it is difficult to isolate and separate it from our own spontaneous experiences" (Foucault 1988:17). This experience of self is that of the individual, which as Clifford Geertz notes (Scheper-Hughes and Lock) is a "bounded, unique" conception of the person (1987:14). I am attempting to grasp Williche–Chilote experiences of self, which in contrast to Western construction are about relations. Understanding Williche–Chilote conceptions of self and self-care becomes even more complexified as biomedical and neoliberal notions of self-care have permeated them. I do not know the history of this concept within Williche–Chilote culture, only a snippet of what *autocuidado* can mean.

The first time I became aware of self-care was in 2007 while working with the WCC as an intern. It is the first objective of their health program: To encourage the self-care of the people's health. Then when I returned in 2010, the term *autocuidado* was frequently used among the different health teams. From the perspective of Carlos, a member of the Williche Council of Chiefs, the Williche concept of health is complementary; it focuses on self-care so that individuals can:

> take part in the medical decisions about themselves, from their own feelings or beliefs. That they want to take Williche medicine or they can contribute in some way [to their own care]. Health is not only to receive something from the doctors or the medical team. Because they [Williche people] know how to take care of themselves, one knows how to prevent [illness], yes how to practice self-care.

This statement speaks to one being able to practice self-care by the tools they have at hand, such as using local remedies in their environment (e.g. plants, seaweeds). In order for some to practice self-care, they have to be taught how to do so, they need "the help of others," as Foucault stated (19988:18). For Claudia, who works with the Council of

Chiefs health team, it is their responsibility as therapists to teach users, not just how to practice self-care but also how to know oneself, to know their own health:

> Patient, come, we are going to take you in and we are going *to teach you* to look after yourself, because the idea is that *one understands oneself*, because we are born with certain weaknesses. For example, I have problems with the liver, so I can not abuse either fats nor alcohol because I have problems of the liver, and I have to learn to live with it. And this is the idea, that people do not become dependent on pills and that they have better nutrition, . . . Then the idea is that the people learn to look after themselves and to get better because *they made themselves ill*.

The idea of an individual making him or herself ill is explored further on. There is a theme in both of these quotes about the desire to limit the dependence on doctors and pharmaceuticals, as well as avoiding certain food and drink (the outcome of which was highlighted with Nauru). The Council wants people to be able to take an active role in their own process of healing and maintenance of health. It is the Council's position to help their people return to knowing how they can practice self-care, in the Williche manner and not only through biomedicine.

I suggest this approach is partially in response to Chilean history and the current way of life for Williche people in the archipelago. During the years of Pinochet's dictatorship it was practically illegal for indigenous tribes to exist in Chile. I was often told Pinochet declared that the category of indigenous people did not exist in Chile—language and customs were discouraged by the state, they were taboo and dangerous to practice. The Williche–Chilote population were capable (and still are) of taking care of themselves through the use of herbs, bonesetters, and a host other people skilled in healing. Slowly changes occurred, lives became more influenced by western culture (including aquaculture). Biomedical practices were instituted (and in some cases forced) by the state. In many ways the Council's promotion of *autocuidado* is linked to the

recovery of ancestral information—to return to self-care—as if this concept is a part of their past (Claudia, CHT). As I became more acquainted with the Williche understanding of self-care, I felt that there was something missing within Western constructions of the self.

North Americans can take steps to improving health by understanding and knowing individual illnesses. However, we created an obstacle in how we understand illness in our society: the biological paradigm and an over medicalization of illnesses. There is also a hierarchical power dynamic, much of the medical power–knowledge is within the doctor's hands—the doctor became a thaumaturge (Foucault 1984a). I feel that in some respects, North American society has discouraged an interest in not only taking responsibility for one's health, but knowing one's health. This is due in part to general pharmaceutical practices—why change your lifestyle or spend time healing emotionally when you can take a pill for that? I saw the promotion of self-care, from the Williche perspective, as a way towards the betterment of individuals and communities—a path to balance—as the adaptation of self-care involves empowering one's ability to care for oneself and to use various therapies. It seeks to explore what can cause illness in an individual—socially, physically, emotionally, mentally and spiritually—in addition to the biomedical paradigm. However, I now understand that there is an ontological multiplicity of self-care. The promotion of this concept changes depending upon which specific assemblage is circulating it.

The Western historical formation of "taking care of the self" is dated to two phases in the Roman Empire, early Greco-Roman philosophy and late Christianity (Foucault 1988). Early Greco-Roman notions of "taking care of the self" dealt with how

one behaved socially and personally; there was a concern with one's education or political life (Foucault 1988). Over the centuries, this concept has undergone ontological transformations: "In Greco-Roman culture knowledge of oneself appeared as the consequence of taking care of yourself. In the modern world, knowledge of oneself constitutes the fundamental principle" (Foucault 1988:22).

In Chiloé, both the concept of taking care of oneself and knowing oneself are present. When I asked Josefina, a member of the WHT to define health she stated: "I believe that knowing yourself is what gives health. I know when I'm depressed, when I was grieving emotionally, I know if I am under a lot of tension my stomach reacts, so if my stomach reacts I do not go to the doctor, I do Reiki, I take herbs and I heal." In order for Josefina to practice self-care, she needed to know herself, to recognize her illness and its cause. Furthermore it was important that she also know how to heal herself—reiki and herbs. Claudia, the same woman who spoke of the importance of teaching people how to care for themselves because they made themselves ill, suggested that health is: "to be conscious of what happens to me, and to know myself and to know because I was doing this, this is what happens to me." So how does one learn to "know oneself?" One manner is through the WCC health program; another is with the transformations promoted through Christianity.

Christianity concerns itself with transformations of the moral self, where knowing oneself is a way to self-renunciation—a path to salvation—one must know and acknowledge ones faults (Foucault 1988). Colonial missionaries employed the concept of caring for the self to "help" individual native bodies undergo a domestic transformation (Lock and Nguyen 2010:162). Then there was a change with medical evangelism, where

the paradigm moved from "proselytization and conversion to one of religious self-transformation and self-fashioning that merged biomedicine with the care of the self. The occasion of illness was a privileged moment for converting the suffering soul" (Lock and Nguyen 2010:162). This example further expresses how biomedical notions were circulated: through both medicine and religion. It is possible that Christian notions of self-care have been entwined with those in Chiloé, as Chile itself is predominantly Catholic—with a substantial Evangelical population in the archipelago.

The goal of these operations is a transformation of the individual, however what is considered the "right" kind of transformation is not decided by the individual body but instructed through the rules and conditions set by Christianity (Foucault 1988). Knowing oneself obscured taking care of oneself, "because our morality, a morality of asceticism, insists that the self is that which one can reject" (Foucault 1988:22). Of interest is how Christian monastic life created a new technology of the self—one that was centred on "complete obedience to someone else. This relation is modeled on the renunciation of one's own will and of one's own self" (Foucault 1988:48). If one is to give up his or her own will and be obedient to god, as a way to care for oneself, then the notion of the doctor becoming a "thaumaturge" is understandable (Foucault 1984a). This change in the technologies of the self, may help to explain why in North America we seem to be more comfortable with the doctor having power–knowledge over our health than practicing self-care. Have we given up our will to care for the self? Could this also be a reason why the Williche Council of Chiefs promotes the practice of self-care, as a means to regain individual control and not be dependent on the doctor?

There are risks in the promotion of self-care, as it can be interpreted in many ways. Neoliberalism has adopted the idea of self-care as a way to transform the individual body for maximum production. Aihwa Ong refers to the United States' Republican Party values where "individual obligations of self-reliance and self-management" form part of the neoliberal agenda (2006:2). One critique of this approach is that it decreases the state's responsibility and increases the individual's; this is especially pressing with the current political direction of health care—should the state pay (through taxation) or the individual (through personal insurance)? The neoliberal subject is "not a citizen with claims on the state but a self-enterprising citizen-subject who is obligated to become an 'entrepreneur of himself or herself'" (Ong 2006:14). The "individual body" (Scheper-Hughes and Lock 1987) is expected to know and willingly perform certain operations in order to achieve a desired state of health, one that enables them to work.[7] With the current global circulation of neoliberal paradigms "these self-help practices are designed expressly to incite individuals to take responsibility for their own health and illness, even in situations where people are assaulted repeatedly by infectious and parasitic diseases and where chronic disease is on the increase" (Lock and Nguyen 2010:28). The danger in this is that state run social and health programs could be eliminated if it is only the individual's obligation to maintain their health.

The notion of individual health responsibility is also present in Chiloé. As Consuelo, a health practitioner for the public clinics saw it there is a need, "for people to feel part of their health and become responsible, they also have to work to contribute to their health, or holding them accountable and involved in their health." However, health can never be maintained solely by the individual due to the external factors that

contribute to one's health. An individual's ability to take responsibility for their health is dependent on many things, such as education, gender, income, state programs, access to medicine, or a clean environment to name a few considerations. The arguments made in chapter one also highlight the need to include the social body and body politic in finding solutions to "individual" health problems. There needs to be balance between one's actual ability to practice, and knowledge of, self-care along with the tools and supports in place to properly do so.

Connections between health and "technologies of the self" are multiple and interrelated in Chiloé. Self-care from the Council's approach is giving the individual knowledge about their body and a plan so that they can practice self-care while incorporating ancestral practices, which include taking care of others and the environment. Does this mean that people have had no prior knowledge of their bodies or how to maintain health? No. What I believe it refers to are the ways in which people need to care for themselves in a "modernized" Chiloé, a Chiloé that has changed with Christian and Neoliberal practices. Part of the problem is that the ontologies of health have shifted over time and will continue to do so. How well can one know oneself in light of "new" illnesses, such as depression or diabetes? How can they be responsible for their health when they may not understand how exactly they became ill? Or, what if biomedical practitioners reject their beliefs about illness causation? This point is further developed in the following section.

Another key concern that the Council's promotion of self-care addresses, is for people to be able to participate in the decisions made about their health, and that this is reflective of their beliefs. The promotion of self-care is important to the WCC because of

the history they have with Chilean health authorities, as I explained in the introduction. There are many Chilotes, both Williche and non-Williche who do not trust the public health care system (explored further in chapter three). Due to this mistrust and past actions by the state, I propose the Council encourages self-care because it reduces—without excluding—dependence on a biomedical system, while promoting aspects of the Williche cosmology.

The promotion of *autocuidado*, I argue, is necessary in Chiloé. Especially as these technologies of the self include helping individuals learn how to know themselves, in order to take care of one-self and others. Given the economic and geographical situations of many people, access to biomedical care is not always readily available or desired. For this reason, biomedical practices cannot always provide adequate health care. Furthermore, one needs to keep in mind that if the state does not act on causes of illness, either environmental, social or biological, then the individual may never be in a position to practice self-care, whatever that practice might entail.

Illness

In this section I explore discourses of illness–disease. The biomedical model separates disease and illness into their own distinct categories (Rhodes 1996). Primary data shows that this distinction does not appear to exist in Chiloé. Again the ontological and epistemological groundings between Williche–Chilote and Euro-American differ. By exploring the ways in which illness–disease is understood and practiced in Chiloé, we are shown that both a socio-centric and biological approach are used. We will also see that

the ways in which people speak about illnesses and what constitutes an illness are different between Williche–Chilote knowledge and biomedical knowledge.

Within the medical anthropology literature the issue surrounding the difficulty of defining disease–illness has been raised as "medical social scientists have often made the distinction between disease and illness . . . disease refers to a set of objective, clinically identifiable symptoms, while illness refers to an individual's perception of those symptoms" (Brown et al. 1996:185). Another way of defining these concepts is as follows: "illness includes the experiences and beliefs of individuals; disease is what biomedicine discovers 'in' the person regardless of his or her (personal or cultural) awareness" (Rhodes 1996:171). This Western distinction between illness and disease is related to Cartesian dualism—the separation of the mind from the body, of healing from curing. A caution with this categorization is that medical "physicians are claiming *both* aspects of the sickness experience for the medical domain. As a result, the "illness" dimensions of human distress (e.g., the social relations of sickness) are being medicalized and individualized, rather than politicized and collectivized (Scheper-Hughes and Lock 1987:10). This is a point that has been addressed in this thesis. On the local level, disease and illness did not appear to be divided, only one word was ever used to speak of sickness–illness–disease: *enfermedad*. (It is translated into English interchangeably as illness or disease). As I want to keep the transcripts as original as possible, I will continue to use *enfermedad* without translation. The term itself was used broadly and generally as having some kind of a problem that encompassed both mind and body; it could be physical, mental, spiritual, social, or emotional.

One approach from the medical anthropology literature that I found both helpful and adaptable to Chiloé, is from an ecological perspective where disease is "a process that is triggered by the interaction between a host and an environmental insult, often a pathogenic organism or germ" (Brown and Barrett 2010:68). Within this definition I would like to explore what constitutes an "environmental insult"? These authors clearly link it to biology; however in Chiloé, Consuelo, a health practitioner, has defined *enfermedad* as follows:

> It means an imbalance in which the person is missing something, or they don't feel well in all aspects of life, at the biological level, it can be an *enfermedad* of the bones, the kidney, also *enfermedad* can be seen as psychological, a crisis in the family, . . . It can be related to the social, for example when there is no work, . . . or when one does not get along well with the neighbours. . . . *Enfermedades* are not only at the biological level; they can also be in all of these areas.

Therefore the "environmental insult" can be violence, a social conflict, or a specific pathology; it comes from outside of the body. Reference was also made to the bio-psycho-social aspect of *enfermedad*, for example, Raymundo a health practitioner at a local clinic noted how "any imbalance in this system will trigger an *enfermedad*."[8]

When one wants to get rid of an *enfermedad*, in Chiloé the Spanish verb *sacar* is often used, which means to remove something or take something off. This may illustrate how the relationship between *enfermedad* and the body is understood in Chiloé, it can be removed or taken off from the body, it can return to the environment. This verb is appropriate for both social and biological insults. As it was explained by Pedro, a member of the Williche Council of Chiefs, even if one is able to remove an *enfermedad*, it does not vanish completely, it may leave the body but it does not leave the environment—as all things are still existing.[9]

When *enfermedad* is understood from this perspective it helps to explain how receiving an *enfermedad* can be thought of as a warning of one's behaviour as Eduardo, a therapist with the WCC health team explains:

> If I get sick from *enfermedad*, where I know I have the means or ability to recover, it's like a second chance but for us it is also a warning that there is something we are not doing well. I'm making a mistake by doing this and something I did produced this *enfermedad*. It has a lot to do with what I did personally, . . . because obviously when *enfermedad* occurs, the first thing discussed is food, the situation in which one lives, or maybe a hereditary *enfermedad* that can be transmitted through the genes, but in reality for us, rather than all those things of the *enfermedad*, the *enfermedad* has to do with our way of life, our *kimun*, and our way of being in balance, peace, unity and harmony.

Enfermedad in this sense is talked about relationally, how one relates to others, to their environment and community. If one becomes ill, it is seen as an imbalance in one or more of these relationships, thus the illness serves as a warning for an individual to regain *Küme Mogen Rüpü*. What we have here is a tangled web of ideas around disease and illness with different understandings and cultural approaches to defining these ideas. How sickness is understood directly relates to the treatment sought and notions of health.

Common Illnesses in Chiloé

I will now turn to the topic of common *enfermedades* in Chiloé. For the most part these include, but are not limited to: cardiovascular problems, hypertension, high cholesterol, diabetes, obesity, cancer, mental health concerns such as depression, and addictions to alcohol, street or pharmaceutical drugs, respiratory illnesses such as bronchitis, arthritis, psychological, physical and sexual abuse, stress, anxiety and bruxism [*bruxismo*]. This list was compiled from answers to an interview question as well as field notes. When I asked people about common *enfermedades* no one mentioned *sustos*, *mal*

de ojo [the evil eye] or witchery. These three were often grouped together by Chiloé health practitioners as spiritual aspects of health and curing. While the study of *sustos*, *mal de ojo* and witchery was not central to my research in Chiloé, I mention them now because of the role they play in Chilote society and with the intercultural complementary health care program. They help to show the frictions between biomedical and Williche–Chilote disease–illness discourses. There are two *enfermedades* that highlight this "friction": *sustos* and *bruxismo* [bruxism] (Tsing 2005).

One of the reasons why *sustos* may not have been mentioned when discussing common *enfermedades* is because *sustos* are not classified as a "disease" in Western discourse. The literature talks about *sustos* as "soul loss" or "magical fright" (Brown and Barrett 2010:235). Raymundo, a health care practitioner, explained Chilote *sustos* as follows: "when a person does something bad towards you, and it generates a scare–shock, which is like a feeling of restlessness, nervousness, a state of sadness or depression. Or with the children, sometimes they say that they had a scare or something, because sometimes the children are restless or cry a lot, things like that." If *sustos* are not recognized as a disease, what are they?

To shed some light on this I turn to the work of A. J. Rubel, who talks about "folk" illnesses as syndromes "from which members of a particular group claim to suffer and for which their culture provides an etiology, diagnosis, preventive measures, and regimes of healing" (2010:236). Rubel used this term so that he could talk about "other" illnesses that were apparent outside of Western conceptions of disease. In the case of *sustos,* it is a syndrome that consists of "beliefs that an individual is composed of a corporeal being and one or more immaterial souls or spirits which may become detached

from the body and wander freely" (Rubel 2010:237). For many years *sustos* were seen as folk illnesses, if they were recognized at all. Recently this has changed as Susan Weller and colleagues note:

> Susto is generally considered to be a folk illness because it is not recognized by biomedical practitioners as a disease. It has, however, been reported among many diverse groups of Latin Americans. Partly because of its widespread prevalence, it is now formally part of the diagnostic classification system in psychiatry as a 'culture-bound syndrome.' (2002:449)

Whether sustos are "folk" illnesses, "culture-bound syndromes," or *enfermedades* they are prevalent through much of Latin America with "regional variations in symptoms and treatments" (Weller et al. 2002:453).[10] These variations make it difficult to essentalize the concept of *sustos* and is consistent with Margaret Lock's notion of "local biologies" (Lock and Nguyen 2010). I find that the experience of *sustos* can be likened to that of anxiety in North American culture.

The second disease in Chiloé that I would like to discuss is *bruxismo*. One of the WHT workers, Claudia, used this term frequently as a diagnosis. It was used when speaking about someone's emotional state—being tense, angry, or stressed. Symptoms included headaches, grinding the teeth and clenching the jaw. One of the most interesting comments about *bruxismo* was that "everyone on Chiloé has it"—including myself I was told.[11] Bruxism, as it is known in North America, is a common disorder. Western science refers to it as "a stereotyped oral motor disorder characterized by awake and/or sleep-related grinding and/or clenching of the teeth"; people who are diagnosed with it are said to have "temperamental traits that characterize bruxers (e.g., aggressiveness, hostility, perfectionism, sensitivity to stress)" (Manfredini and Lobbezoo 2009:153; 154). Bruxism differs from *sustos* in that it fits into a medicalized category, yet "despite the importance

of its clinical effects, there are still many unsolved issues concerning the etiology of bruxism itself" (Manfredini and Lobbezoo 2009:153). Unlike *sustos* the effects and etiology are evident in the biological body.

Although there is a biomedical understanding of bruxism, it is very much like *sustos* in that it is also classified as a "syndrome." According to Byron Good, a syndrome is "not merely a reflection of symptoms linked with each other in natural reality, but a set of experiences associated through networks of meaning and social interaction in a society" (1977:27). I would argue that in Chiloé *bruxismo* can been seen as both a medical disorder and a syndrome. As it was explained by Claudia a member of the WHT:

> The *bruxismo* is an intolerance, it is anger, and it is necessary to work with the energy, with flowers, with herbs, to relax the person, because what they suffer is more complex than just clenching the jaw, it is what they are thinking about or what has happened to them.

In the same article Good asks, "What does it mean to have 'heart distress' in Maragheh"—the syndrome he investigates—and if there is a "distinctly Iranian network of meaning which must be described if we are to understand heart distress" (1977:27). Given the frequency of *bruxismo* in Chiloé and the understanding that it is more than just grinding teeth—it is also an inner rage—I believe there is a distinctly Chilote network of meaning and set of experiences that lead to *bruxismo* as a syndrome. Unfortunately, during my time in Chiloé I was unable to follow up on the experience of any one *enfermedad*. I believe investigating *bruxismo* or *sustos* would give an understanding of Chilote culture, history, society and current daily stresses.

Etiologies

A discussion on illnesses in Chiloé would not be complete without looking into common etiologies. Glick notes (Foster) that:

> The most important fact about an illness in most medical systems is not the underlying pathological process but the underlying cause. This is such a central consideration that most diagnoses prove to be statements about causation, and most treatments, responses directed against particular causal agents. (2010:105)

Anthropologists have been intrigued with and studied etiological cultural differences. Foster (2010) wrote of personalistic and naturalistic causation, which contradict the approach taken by Western medical systems. However, these approaches do not exactly "fit" with Williche–Chilote etiologies.

In Chiloé, I found there were two main etiologies, which appear to be historically known: transgression and imbalance. *Enfermedad* was explained in the context of a transgression, which the Canadian Oxford dictionary defines as: "[to] contravene or go beyond the bounds or limits set by (a commandment, law, etc.)" (2000:1120). At first I was confused by the use of this term in the context of *enfermedad*. Was it understood that one could get an *enfermedad* by going against a law, or divine command? Not exactly, how this concept was explained by Pedro, a member of the WCC, is that one gets sick because of something one has done to invite the *enfermedad* in: "It is the imbalance as a result of a transgression, we all get *enfermedad* for some reason, nobody gets *enfermedad* for nothing. I also believe in the Williche worldview that the *enfermedad* always comes from outside, we have the doors open or closed to the *enfermedad*." Earlier when I discussed what health meant, Claudia, a therapist with the WCC health team noted that people made themselves ill; that in some way they brought *enfermedad* into their lives, perhaps through a transgression (e.g., eating foods high in fat or salt). The understanding

of illness as a transgression can also be found in the South Pacific (Widmer 2010). In New Hebrides (what is today known as Vanuatu) pre-colonial beliefs of illness causation were linked to sorcery and transgressions of rules, which would as John Taylor notes (Widmer) "invite sickness or cause a ghost to follow . . . where it might prey on others" (2010:60). Once again there is a commonality between an Oceanic and Chiloé archipelago.

The concept of balance is very strong in Chiloé. *Enfermedades* can be caused by an imbalance, however it is not only an imbalance within the body, it is also includes the environment, society, or spiritually. That is perhaps why when one becomes ill, it is recognized as a warning sign; a warning that one has strayed from the path of balance.

The variety of etiologies in Chiloé is suited to the number of *enfermedades*, as David a health care practitioner summarizes: "the genetics, the cultural, the machismo, the things of ethnic groups . . . bronchitis because we are in a cold rainy place, . . . There are climatic, biological and social reasons" as to why people become ill. The majority of interviewees spoke about the etiologies of many noncommunicable diseases that were explored earlier in this thesis. *Enfermedades* such as depression, obesity, and hypertension appeared to be linked to changes in the way of life, including a loss of respect for the environment according to Ana, a Williche therapist:

> These *enfermedades* that are taking place today, also are from food changes in the daily life of every person, because today we live in a very rapid world, we do everything quickly, and I believe that this has been making people sick, and . . . the majority of us we have lost the respect for the land, and for nature. Then that is what is making us ill, I believe that before probably these *enfermedades* have existed, but the people were treating themselves with herbs.

Depression and other mental health concerns have been on the rise in Chiloé. The majority of people who attended the ICHCP were diagnosed with some form of

depression. The general sentiment across the three ethnographic sites was that cases of depression were increasing across the Chiloé archipelago. What was apparent to me however was that the diagnosis was not treated as a life-long problem; instead it seemed to be considered a temporary condition that could be resolved through treatment.

The work of Ian Hacking (2007) has been helpful in understanding the increase in depressed people in Chiloé. He investigates how the ways of "'making up people' affects our very idea of what it is to be an individual" and how a certain "kind of person came into being at the same time as the kind itself was being invented" (2007:150; 156). While depression has been known in the Western world it seems to have only become prevalent in Chiloé recently. Eduardo, a member of the CHT spoke about the current trend of depression: "The theme of depression is the fad, it is very strong now, there is a lot of concern. What happens with depression, it is an *enfermedad* that attacks different people, men, women, children." The depressed individual now has a role to play in Chilote society or society now has a new way of classifying certain individuals. So what could have created a space for the depressed person to rise in Chiloé? Eduardo, gives us his opinion on the etiology of depression:

> It has a lot to do with, that today we have a great number of people from the [Williche] communities living in the urban part, . . . because today they have no land, no forest. Resources of the sea which they had before are no more, and those that are there are limited. The forms of life have been changing, the ecosystem has been changing and the way of life that exists, today [people] spend days on the Internet connection, telephone, vehicles, aircraft, things that have cost the communities a lot to adapt to this new form of life.

I would like to remind the reader about the influence of salmon and mussel aquaculture on environmental and human health as discussed in chapter one. After a switch from largely subsistence living to the economy of wage labour, there was massive

unemployment (impacting mental health) with the spread of the ISA virus. It is also likely that the deterioration of the natural environment was a concern for many, as stated by both Ana and Eduardo above.

If, as Glick suggests (Foster 2010), it is the cause that should be given the highest concern then the social, environmental, cultural and biological aspects of *enfermedades* as Williche–Chilotes see them need to be addressed. Yet etiologies are not static, they are fluid and change across time and space. If we are to grapple with the differences in how *enfermedad* is understood, then an insight into how *enfermedades* have changed (and remained) is needed. I draw a parallel here to the work of Marshall Sahlins' *Islands of History*. For Hawaiians the "meaning of *mana* was changed" as European goods became available and desirable, they became *mana* (Sahlins 1987:151). In Chiloé (and many other places) has the meaning of illness not also changed as Western cultural and economic practices become more diffused throughout everyday life? As discussed in chapter one, Islanders have been experiencing centuries of disease etiologies. For Isabel, a public health care practitioner, the changes in Chiloé are explained as follows:

> Before there was not junk food, children played in the field, they helped their parents in planting, harvesting, there was no physical inactivity. So now we have more technology, we can treat *enfermedades*, but also in some ways *we bring* the *enfermedad* with our technology and progress. (Isabel)

In other words, technology and progress can be seen as a transgression. It becomes more complicated when we start to look outside of individual actions and to those of the social body or body politic.

The meaning of health and *enfermedad*, will continue to change in Chiloé, they are shaped by expert knowledges. I question how the concept of transgression is being challenged by "new" illnesses such as alcoholism, diabetes and depression. Can these

diseases of "modernization" or "colonialism" be explained through the Williche cosmology, as a transgression? As an example, if one has obesity is this a transgression? Or a warning? In some sense, an individual has brought it upon oneself because one eats "bad" foods. Is the individual not completely responsible for their own health and illness as neoliberal practices incite? On the other hand, reasons why an islander eats unhealthy food is not necessarily invited or controlled by the individual, as discussed in chapter one. There are other forces at work such as farms changing from diverse to mono cash crops, global changes in food and agricultural industries, devaluation of local food supplies (algae for example) and natural resource pollution. So while the individual "invites" obesity in by poor food consumption, do the social, political and global body not also inflict obesity on the individual body by influencing choices? The individual body is not bounded—it is not an island onto itself—it is related to the social and global body. Due to external forces many Chilotes have adapted poor eating habits, non-physical labour and entertainment. Changes such as this play a part in the increase of "new" diseases–illnesses throughout the archipelago but so has the salmon farm industry.

The ontologies of illness–disease are taking shape through both Western (including colonial) and Williche–Chilote epistemologies. On Chiloé there is a social and a biological approach, without the separation of illness and disease. *Enfermedad* can be from environmental insults or personal (and global) transgressions. In some ways these ideas around illness are conflicting and involve different ways of thinking about health. As Shigehisa Kuriyama points out, the "challenge lies precisely in coming to terms with what we mean by 'different ways of thinking'" (2007:595). Because Chiloé has been under the influence of European expert knowledge for 500 years, it is difficult to say

exactly how the concepts of *enfermedad*—and health and curing for that matter—are shaped by each cosmology. These examples speak to the multiplicity of ontological categories, how they change and shift, how they "are brought into being, sustained, or allowed to wither away in common, day-to-day, sociomaterial practices" (Mol 2002:6). An important question I feel is what happens when there is a clash between etiological epistemologies? Can the cause(s) of an illness lead to treatment(s) when discrepancies between causes exist? In short, yes, as the etiologies are in some ways interrelated. It then becomes a question of balance between the expert knowledges. This point is further developed in chapter three, but for now I will focus on the ontologies of treatment.

Curing–Healing

When is someone cured and when is someone healed? Is there a significant difference between curing and healing, and if so, what is the relationship to the ailment one is suffering from? These are points that have been raised within the medical anthropology literature. As James Waldram notes, it has "become de rigueur to accept that *curing* refers to a primarily biological process that emphasizes the removal of pathology or the repairing of physiological malfunctions, that is, disease, while *healing* refers to a broader psychosocial process of repairing the affective, social, and spiritual dimensions of ill health or illness" (2000:604). What is the purpose of this separation? If curing and healing act to alleviate a person's dis-ease, why are both terms needed? Is it possible to be both cured and healed at the same time? Or do certain treatments only cure or heal, but never both? The parting of curing and healing arose out of European cosmology and today it is related to differences between disease and illness.

Euro-American focus on the individual biological body has created categories for the treatment of ailments, which has led to the separation of healing and curing. One insight comes from the distinction between religion and science or the division of mind and body (Cartesian dualism). Lock and Scheper-Hughes speak of Rene Descartes and how he

> used the concept of the thinking being to establish 'proof' for the existence of God whom, Descartes believed, had created the physical world. Descartes, a devout Catholic, stated that one should not question that which God had created; however, by creating a concept of mind, Descartes was able to reconcile his religious beliefs with his scientific curiosity. (1990:52)

Descartes was concerned with maintaining his religious beliefs, which include Christian miracles and matters of the "thinking being" (the mind), yet his scientific curiosity of the biological body needed a biological approach, an examination of the body (Lock and Scheper-Hughes 1990). In order to pursue both they had to be separated. The effect of this dualism (and boundedness) is still present when speaking about the "difference" between healing and curing. As Margaret McGuire notes (Waldram), for contemporary Christians "to be healed is not necessarily the same as to be cured. It is common to have received a healing and still have symptoms or recurrences of illness" (2000:605).

One of the reasons why I am asking these questions is because in Chiloé being cured and being healed are in some ways used interchangeably. Arturo, a public health administrator, explained that curing is a very broad concept and healing is framed as a state one reaches after one has overcome a problem:

> Curing, there are religious concepts of this that are very old, to cure, which is associated with getting one to stop having pain and hurting, one speaks of the Christian miracles, for example, that Jesus cures the sick and tells them: "You are healthy," then the word is associated with healing, healing is to put one in balance.

From this statement curing can be both the removal of pain and also a religious miracle. However curing "is associated with healing" and to heal is to be in balance, it is a process. There is a separation between curing and healing in Chiloé, except it is not the same as Western classifications. Curing is not solely associated with the biological, but then Williche–Chilote *enfermedades* are not only explained by biomedicine. James Waldram states that "critical examination reveals that the boundaries between curing and healing are really quite unclear" (2000:607). In Chiloé, while there is a separation the lines are very malleable.

Throughout the Chilote fieldwork many conversations took place about what healing–curing meant and how one was treated. The focus was not so much on the definition of these terms but the practices and tools involved. A common theme was that healing–curing is not just alleviating the symptom; the cause of the *enfermedad* or problem needs to be discovered, then treated. This is an interesting approach because if the cause of the ailment is not sought after, one could go on treating the symptoms incessantly. Chilean doctors were often criticized on this point because they were seen to be only dealing with the symptoms of an ailment and not the actual cause(s). In order to find the cause, users of the WCC health program underwent a thorough interview where they were questioned on their diet, sleeping patterns, deaths of loved ones, medications, social relations, the past, and most importantly what they thought the cause of their ailment was. Everytime a user went to the WCC health team the therapists were able to dig a little deeper into the cause of *enfermedades*. This approach allowed personal reflection on many of the *enfermedades* in one's life, as well as an attempt to find causes.

In many situations curing was talked about as the action that was involved, one had to remove the symptom, ailment, or discomfort and help release the pain. This action connotes detaching the sickness from the body. The ways in which an ailment could be detached are various and since in Chiloé illnesses are attributed to environmental, social, and biological causes, removal could involve various therapies. Curers–healers who are outside of the biomedical system play an important role in Williche–Chilote culture as Luis a health administrator notes: "looking for a cure through the *sanador* (witch doctor's) words or through a *compositor* (bonesetter) or with a person that takes out the bad spirits, these persons cure us too." The practices of healing and curing include the work of *machis* (Williche spiritual healers), *lawentuchefe* (Williche herbalist), social workers, psychologists, midwives, nurses, doctors, etc. Each one of these positions takes a different approach to "doing" health. They may all be concerned about the health of the individual but what they would view as a concern could be specific to each healer. Therapies used within the CHP are a collage of local and global healing practices such as, reflexology, reike, massage therapy, acupuncture, counselling, Williche ancestral medicine, and flower essences.

Curing in Chiloé encompasses more than just biology, in a sense it unites the body and mind. For María, a public health practitioner, curing "deals not only with the body I think more than the body, in spirit, for when the spirit is sick, your body gets sick." Curing was spoken about in a very broad manner by Isabel, also a public health practitioner, for whom "to cure means to alleviate, but not only relieve physical symptoms, to soothe the soul, the feelings, the emotions, the grief, the sadness, that is to heal." For others healing encompasses the biological, the psychological and the social.

One conversation around healing struck me, the healer as teacher. Claudia alluded to this on page 80, when she discussed the importance of the therapist teaching someone how to know oneself better, to know what makes one ill. The teacher's role is not just to explain why one is sick but also to give tools so that one can make oneself better. These tools are not just pharmaceutical drugs, they involve working with the energies of the person, unblocking emotions, using flower essences and helping the "user" understand why they are ill and how to change that. This idea does put the responsibility on the sick person; it demands a level of self-care, of *autocuidado*. Then again it also means that the healer has to supply the necessary tools for healing to occur. Healing and curing in this sense are about change as Carolina, a therapist with the CHT states:

> Curing is not to cure a wound, it is not to cure something. Curing is about change, because if someone is sick, because they eat too much fat, they are not just going to have to stop eating fat, but one is going to have to make a change in food, in what you buy, a complete change. Then healing has to do with helping the other to change . . . I give the tools and the person is doing the job. I do not win anything by giving them an aspirin to take away a headache, when in fact he has a headache because he drinks alcohol, or a headache because he will not do any work. The art of healing is to give a person the tools for them to heal.

As noted in the Health section, the idea of self-care is very strong in Chiloé. It is directly related to this idea that healing–curing is a way to help the other to change. The tools for healing–curing in this case are therapies that help to affect change in the individual—physically, spiritually, emotionally and mentally. This change is not going to occur overnight, it is a process that involves an adjustment in one's way of life, not merely taking pharmaceuticals.

Conclusion

Through an exploration of the ontologies of health care in this one archipelago I have shown the disjunction and the "interconnection across difference" of the expert knowledges involved (Tsing 2005:4). With so many differences in how health, disease–illness and curing–healing can be done, how can there be any agreement? The concept of balance, both literally (as in *Küme Mogen Rüpü*) and figuratively may be able to achieve this.

At the beginning of this chapter I posed the question of whether or not the discourse of balance could bridge the perception of "universal" and "culturally specific" expert knowledges. The reason I asked this question is because I was surprised to discover not only how the idea of balance permeated across the three field sites, but also its existence in the medical anthropology literature. In Chiloé I knew that the concept of balance was strong with the Williche Council of Chiefs. Carlos, a Council member described *KMR* as follows: "It is a concept about how a person looks or searches for his–her path, to find the equilibrium–balance, it is a way to enter into a state of harmony, in relation to him–herself, using the [Williche] medicine, the herbs for his–her relief." Then it appeared again when I asked other interviewees to define health. For Cesar, a health practitioner, health referred to "the balance between the biological, the psychological and the social . . . you have health when you reach that balance." Arturo, a public health administrator felt that "health is a state of equilibrium in which multiple factors combine to enable people not only to feel well, they are well . . . if you have a factor that causes you concern, a factor that causes anguish, this is where the balance is lost."

Balance was also spoken of in regards to *enfermedad*, which was frequently said to be a loss in balance or an imbalance. *Enfermedad* as a warning also speaks to an individual's need to regain balance with the different relationships in their life. When someone needs to be cured or healed as Pedro, a member of the WCC, explained "it also has to do with the recovery of balance, it is not enough to cure a symptom of an *enfermedad*, one has to contribute to the restoration of balance of the people." A health practitioner, Angélica, thought that one is healed when they are "achieving a balance." Ontologies of balance are active across all three field sites; and used by Williches, non-Williche Chilotes, those who have moved to Chiloé, and those who have been trained within the Williche or Western expert knowledge systems. There is no simple explanation for this.

From the medical anthropology literature ideas of balance are related to "body processes" and "strong emotions" which "are based upon humoral theories that were first elaborated in the classic texts of medical science several thousand years ago . . . imported to the New World in colonial times, they still play an important role in Latin American communities" (Leslie 1976:1). This statement raises the question of the epistemology of balance. Is the use of balance in Chiloé a part of colonial legacy? Is it a localization of expert knowledge from elsewhere that has been sustained over time through "sociomaterial practices" because it coincided with colonial and Williche ontologies of health (Mol 2002)? Or is this an example of indigenous knowledge being appropriated by the West and then conveyed back to indigenous people through a Western lens? A more thorough understanding of balance and *KMR* is required to answer these questions.

Even though health, illness, and healing are seen in a multiplicity of ways in Chiloé—from a biological paradigm to a socio-centric one—the idea of balance can be found throughout. What does this mean? Once again I return to Annemarie Mol's *The Body Multiple* for clarification. She speaks of the multiplicity of atherosclerosis (a disease of the arteries), and how it has come to mean *different things* depending on whether you are the patient, the surgeon, or the lab technician. Yet atherosclerosis

> is the word they use when they want to talk to one another. The term is a coordinating mechanism operative in conjunction with the various distributions. *It bridges the boundaries* between the sites over which the disease is distributed. It thereby helps to prevent distribution from becoming the pluralizing of a disease into separate and unrelated objects. (Mol 2002:117, emphasis added).

By applying this notion to my work, I suggest that the concept of balance is also a coordinating mechanism; bridging the boundaries (islands of medicine) between the sites over which health care is distributed in Chiloé: the WCC centre—*Mapu Ñuke*; Chiloe's public health centres including Centros de Salud Familar (CESFAM) [Family Health Centre] as well as a Centro Communtario de Salud Familar (CECOSF) [Community Family Health Centre]; and the health services administrative offices.

Just as there is a multiplicity to atherosclerosis, so too is there a multiplicity of balance and health, illness–disease and curing–healing. With the examples I have given in this chapter, balance was used to explain the relationship between the bio-psycho-social; ones' relationship with nature; identity and modernity; and, to explain what health, sickness, and healing are in Chiloé. If the idea of balance (as practiced through *Küme Mogen Rüpü*) is able to create a bridge over the boundaries of the different sites through which health care is distributed in Chiloé, then one needs to consider the temporalities of this balance. The relationship and frictions between the praxis, as well as the

epistemologies of expert knowledges must be shown. In the following chapter, I do this by exploring medical plurality through the practice of integration between Indigenous health technologies and national—biomedical—health care systems on islands in both Chiloé and Oceania.

Notes

1. See Naomi Aldeson's (2006) work with Canadian Cree.

2. It is unfortunate how the word tradition has been juxtaposed to modern. This word now has to be used cautiously. If I use the phrase traditional medicine, am I devaluing ancestral practices and knowledge.

3. Tsing also notes "botany was perhaps the first science concerned with uniting knowledge from around the globe to create a singular global knowledge" (2005:90). She credits botanical science with the spark that ignited the passion for creating "universal" systems (Tsing 2005).

4. Tim Ingold speaks of the difference between the globally detached view and the locally engaged view: "Traditional cosmology places the person at the centre of an ordered universe of meaningful relations" (2008:468). In Chiloé the social health of an individual is centred because of its importance to Chilote society.

5. Reflexology uses points on the feet to discover and treat ailments throughout the physical and emotional body. Early versions have been found with Egyptians, Chinese and Native North Americans. (International Institute of Reflexology 2013)

6. Due to the nature of the research, timeline and involvement with the WCC I was unable to investigate how the other four organizations practiced health.

7. Foucault (1984b) has written on the body's docility; it has long been regulated and manipulated to perform certain operations.

8. The bio-psycho-social model is supposed to "bridge the biological and social . . . [and] grounds the study of disease in historical and political-economic context" (Sargent and Johnson 1996:xi). Yet it has come under critique because of "an assumed predominance of biology and a neglect of the fact that the most important phenomena are the interactions of mind, body, and society" (Brown et al. 2010:11).

9. This approach is relational rather than bounded. The illness is not a bounded entity, it is part of the individual, part of the environment—there is always a connection to it, however the connection can be enabled and disabled.

10. The American Psychiatric Association (APA) uses the category "culture-bound syndromes" in an attempt to classify conditions popular in cultures around the world; they exist in the North as well as the South (Flaskerud 2009). Problems with this classification system are that the number of cultural-bound syndromes is greater than those within the APA; the APA tries to "universalize" local meaning-centred illnesses; and the system itself is a reflection of Western medical biases (Shimoji and Miyakawa 2000). The Western approach towards "culture," in a medical sense, believes that culture

can prohibit the use and acceptance of scientific knowledge, there is a "medicalization of culture" with the use of cultural bound syndromes (Lock and Nguyen 2010:8).

11. Through my experiences in Chiloé I gained insight into my own health. I learned ways to know myself, and take care of myself. I was invited to undergo some of the therapies offered by the Williche Council of Chiefs' health team and given ancestral medicine. My outlook on what health is and what it can be has drastically changed over the last five years. I often use therapies that fall under Asian health systems, such as acupuncture and acupressure. The practice of Kundalini yoga has also been a saving grace in many ways, as well as my own desire to live a more balanced life.

CHAPTER THREE

If there is acceptance of different approaches to health care and different ontologies, yet relatedness among them, what is the next step (Mol 2002)? How can we ensure that a person who suffers from *sustos* or depression gets the "right" form of treatment? The answer may lie in the practice of intercultural health, medical plurality or integrating different health techniques or systems. These are no small feats. There are indeed frictions and power imbalances between expert knowledges. It is more than just balancing the enactments of expert knowledges in relation to health: as I explained in chapter one, it involves the triad of health, environment, and economy; and finding balance between the individual body, social body, and body politic.

The imbalances between global and local conceptions of health exist outside of Chiloé as well. There has been, and is, a devaluation of the efficacy of indigenous medicine, a rejection of this knowledge, and a constant contradistinction with "modern"–Western medicine on a global scale (Waldram 2000; Crandon 1986). Even so, there is a push by global health bodies, such as the World Health Organization, to institutionalize indigenous health technologies (IHT). In this chapter I analyse the reasons for and ways in which the integration of IHT with public health care systems on islands has developed. And I speak to the second research question: What is the space and place of medical plurality on islands?

The two approaches I examine are quite different. The first is the local approach in Chiloé: an Intercultural Complementary Health Care Program (ICHCP) where the WCC's program was integrated with public clinics. The second is an institutional

approach, in Oceania, where the WHO promotes the integration of mostly, one specific technology—ethno-botanical knowledge—for all Pacific Islands. I could say the former implements a culturally specific model and the latter a "universal" one, knowing these are theoretical traps to be avoided; however, these are the enactments that need to be explored.

The dynamics between Williche–Chilote cultural practices and biomedical practices is central to this chapter. I show that biomedicine on its own does not meet the full range of health care needs in the archipelago. As previously discussed, biomedicine is a culturally specific system that "represents the reductionism, individualism and mechanistic thinking of Western Societies" (Good and DelVecchio Good 1993:81–2). It has created its own *boundaries* as a system that is closed off from the influence of others and specialized in its own right (Lewis 1993:190). For many indigenous island communities, the biomedical approach does not fulfill the requirements of cultural awareness and community health; for example, the idea of a closed system is contradictory to Tongans' approach to medicine (Capstick et al. 2009; Binns et al. 2010). In Tonga the approach to illness is "open, flexible and pluralistic"; these characteristics are important for the survival of island culture (McGrath 1999:483). With a post-colonial approach to health on islands, a pattern of the imbalances between expert knowledges and the health care needs of islanders emerges.

The integration of IHT with state run health care programs could bring a positive outcome for the health of islanders, yet the practice of this is problematic:

> A considerable amount of integration, syncretism, and borrowing has taken place between indigenous and biomedical practitioners over the past century, and a large number of indigenous healers have adapted to the new global reality, often adding one or more biomedical technologies to their repertoire. At times such

> adaptations are the result of pressures placed on healers directly or indirectly by governments to systematize and standardize their practices—to "biomedicalize" themselves. (Lock and Nguyen 2010:63)[1]

As I have shown in chapters one and two, there is a connection between the biomedicalization of indigenous health technologies and colonial policies. It is often indigenous healers who are supposed to change their techniques while biomedical technologies stay the same. Or biomedicine through advancements in pharmacology "modernizes" ethno-botanical practices.

In this chapter, I relate "enabling violations" present in colonial health ideologies with recent global health policy on the integration of "traditional medicine" (TRM) in Oceania (Spivak 1998). As Nicholas King has stated, "Colonialism's goal is *conversion*: of indigenous medical belief systems and practices into biomedical science, and more generally of 'primitive' into 'modern' ways of knowing and doing. The post-colonial agenda has *integration* as its goal and its dominant metaphor" (2002:782). So what does the integration of "traditional medicine" mean? On the global level it can translate into the creation of universal policies and resolutions such as,

> a 2009 WHO World Health Assembly Resolution on Traditional Medicine (WHA62.13) which urges national governments to respect, preserve, and widely communicate traditional medicine knowledge while formulating national policies and regulations to promote appropriate, safe, and effective use; to further develop traditional medicine based on research and innovation and to consider the inclusion of traditional medicine into their national health systems. (Robinson and Zhang 2011:7)

While the intent of such a resolution may be to improve the health and lives of people, I have concerns with the implementation of such policies as another example of colonial conversion or knowledge misappropriation. Feminist science studies scholar Sandra Harding explains how "development policies, intentionally or not, largely continued the

earlier imperial and colonial pattern of directing the flow of natural, human and other economic resources from the South to the North, and from the least to the most already-advantaged groups within societies around the globe" (2008:143). In Oceania, policies on the use, categorization, and development of "traditional medicine" may lead to Northern drug development (Lock and Nguyen 2010).

Global assemblages shape the integration of IHT in both Chiloé and the South Pacific. As I show in this chapter, the body politic through global health policies influences even the local approach to medical plurality in Chiloé. Once again these health care systems cannot be thought of as independent bounded entities—they are related to their surroundings. The exploration of these relationships begins in Chiloé.

Williche–Chilote Approach to Medical Plurality

After the WCC addressed their concerns with the human genome project in 1996, they continued a *chafun* [circle of conversation] with Chile's Ministry of Health. The progression of this work included a regional committee of intercultural health in which the WCC participated. The work of the Council in intercultural health received awards and recognition from various organizations.[2] Resources awarded to the Council went towards developing a health program in Chiloé. The Council had the foresight to realize that it was not just they who needed to be involved, but also the communities and different actors within the public health system. In the 2000s the Chilean state started to fund the WCC health program. The dialogue between the Ministry of Health and the Council of Chiefs evolved to a point where the Council felt that:

> We are no longer speaking to the ministry to fund a project, but we are speaking of the need to co-manage a health program. That the same space of public health will generate conditions to develop a relationship between the Council of Chiefs and the health team's manager, and the co-management of the program is not only financially, . . . but also to co-manage technically, and when we talk about technical co-management we are talking especially about an interdisciplinary relationship. (Pedro)

By 2003 the Council felt it was time to do more than just share their ideas about health, they needed to:

> transform it into an effective and practical experience of care, . . . to see that it was possible to develop a model of care which satisfies the user, regardless of the infrastructure, it did not need central heating . . . but people could feel happy and be cared for, because we said that the most important thing in this process were *the human relationships*. (Pedro)

The *chafun* with the ministry and work of the Council led to the development of a fully functioning health care program—*Küme Mogen Rüpü*—that offered a variety of services and treatments. They use their community centre (*Mapu Ñuke*) to house the program and offer their services to both Williche and non-Williche. Everything from the style of the layout to the communal lunch meals is prepared to promote aspects of Williche cosmology. At times the health team would bring their services into both urban and rural communities on health rounds.

The role of indigenous ancestral medicine is very important within the CHP, in fact from what I saw between 2007 and 2010, the use of ancestral medicine has expanded due to the Council's program. The program has brought their *remedios* (made from parts of plants, trees, herbs and seaweeds) into Williche communities with their health rounds, prescribed them at their centre and sold them at public events such as the *Feria de Biodiversidad,* a large public fair that celebrates Chilote culture and products in Castro. In 2007, these *remedios* were "prepared, bottled and labelled at the laboratory by Rosa

Carimoney, the Lawentuchefe (herbalist) for the centre"; there were "numerous types of medicinal products, which include[d] 30 different kinds of drops, 8 different kinds of external lotions, various skin creams, massage oil and syrup for asthma" (LeVangie and Quenti 2008:27). The Council covers the cost of producing *remedios*, which requires having a laboratory on site and purchasing the equipment needed to make the remedies and package them.

In 2010, Rosa was still preparing *remedies* with the number of drops increasing to over 40 different kinds. One change I did notice was that the process for making *remedios* was becoming biomedicalized, evidenced by new regulations for Rosa to wear a white lab coat and facemask during preparation. The importance of the Council's ability to produce their own *remedios* using indigenous ancestral knowledge, meant that they also had control over their distribution. This was extremely important when they would visit their own communities because it allowed them to decrease the cost of the remedies for those of lower economic standing. They could meet the needs—economic and health—of the Williche population.

The Next Step: Integrating Küme Mogen Rüpü and Creating an Intercultural Complementary Health Care Program

The success of the WCC health program and work with various health authorities in Chile enabled the conversation of intercultural health to continue, although the Council was not entirely satisfied with just having a health program. They wanted to see their vision and approach to health care throughout the state's system.[3] The Council's drive led to the merging of their health team and therapies with public health clinics in the

archipelago. The individual relationships between the Council of Chiefs, the Municipality of Quellón, and the Director for the public clinics in Quellón played a large role in implementing the ICHCP. There had been integration in the past, for example teams from the public health clinics offered training and workshops on intercultural health at *Mapu Ñuke*. But the program that was implemented in 2010 was on another level.[4] The Council worked for this program and pushed for health care changes. They felt that the public health system relies on a biomedical style of care where according to one member, Pedro, there also exists a "professional culture that is highly hierarchical" with the doctor on top and the patient below. For Pedro this kind of a relationship was concerning as:

> The hierarchical relationship greatly damages the effect of the therapeutic actions on the people, then we see that, and seeing that the majority of our people go to the public health service, because that's where all the resources are, . . . it is why we decided to deepen the relationship with the public health system and to work together with it, providing not only treatment, but providing a view, providing some form of tools to reshape the system, that is, to *generate a new model of health care*, that allows this biomedicalized public system, but it has the intention to be a family health model, with an intercultural approach.

In January 2010 the Williche's health team started to bring their services and therapies into selected public health clinics, three in the town of Quellón and one on the island of LeMuy. These areas had public health clinics such as *Centros de Salud Familar* (CESFAM) [Family Health Centre] or a *Centro Communtario de Salud Familar* (CECOSF) [Community Family Health Centre]. Additionally they had a Williche population and were in close proximity to these communities. They would visit the three clinics in Quellón twice a month and LeMuy once a month. In order to be seen by the *Mapu Ñuke* team you had to have a referral from a professional within the public health service (doctor, nurse, midwife, psychologist, etc.). The cost of receiving therapies and remedies provided by the team would be covered under the "users" health insurance. The

idea was for the *Mapu Ñuke* team and public health workers to work in tandem for the benefit of the user.

I would like to walk you through the program from the perspective of one user. This is an actual case of the interview each new user had to do. The Council's health team (CHT) employed this method in *Mapu Ñuke* as well as when they did their health rounds. The interview template was created by and for the CHT.

> Cecilia is a woman in her forties who hasn't been to see a doctor for as long as she can remember. However, she was recently seen by a midwife who was able to refer her to the Council's health program. As this is her first time attending the program she first undergoes an in-depth interview with the CHT. This interview process draws a lot of information from each individual. Cecilia is questioned on why she came to the intercultural program, her daily habits, use of medications, previous illnesses she or family members had, deaths that have affected her, relationships in her home and at work, violence or anything else that is bothering her, either physically, emotionally, mentally or socially.
>
> Cecilia is also questioned on what she thinks the cause of her ailments may be, if there is any relationship that could be related to her symptoms. Part of the interview encourages Cecilia to think about what is occurring in her daily life that may cause her any problems. This is part of idea of *autocuidado* discussed earlier. Cecilia is now ready for the treatments, which include reflexology and reiki. These treatments can also act as a way to discover more about Cecilia's concerns. Reflexology will make her aware of any blockages occurring in her body or particular concerns for an organ. At the end of her treatments the Lawantuchefe (herbalist) writes down a prescription for some of the remedies she has made. At times, when available, flower essences may also be prescribed. As Cecilia is accustomed to taking herbal teas for ailments, she is more comfortable with these remedies than pharmaceuticals.

Global–Local Reasons for Chiloé's Intercultural Health

When I arrived to Chiloé in March 2010, I was surprised to learn that the CHT was bringing their therapies and techniques to public health clinics. Here was the integration of these two distinct systems—medical plurality in action I thought! Personally, I took the integration to mean that the public health system recognized the

importance of the WCC health program and their therapies. As an anthropologist in Island Studies I became interested in learning about how this integration came about. Was there something special about Chiloé, as an island, that allowed the integration to take place? I needed to learn the history of this integration and observe how the ICHCP functioned. In order to accomplish this I created an interview question on why people thought the public health system and the Council of Chiefs were working together.

I asked about the integration from two perspectives: "In your opinion, why does the public system want to be integrated with the Williche Council of Chief's health program?" (P. 1); and, "In your opinion, why does the Council want the health program to be integrated with the public system?" (P. 2). My experience in Chiloé led me to believe that there would be a difference of opinion in why the integration took place. It was confusing to understand who the stakeholders were—Chile's Ministry of Health, Chiloé public health office, Provincial Director of Health, individual public clinics, and Council of Chiefs—and what they contributed to the Intercultural Complementary Health Care Program.[5] There were also key individual and personal relationships entangled throughout.

At first I thought that the intercultural approach on Chiloé was unique to the area and that there may be an island variable at play. However, once I started interacting with members of the public health offices, I quickly learned that there were four other Williche health organizations in Chiloé working with this office. Secondly, I was informed that the conversations of intercultural health were taking place across Chile with other indigenous peoples; that the state had developed a policy and special program on indigenous peoples health. It was not just the WCC who were demanding a voice in

the area of health but all of the Indigenous peoples in Chile including groups under the Mapuche, Aymara, Rapa Nui (of Easter Island), Atacameño, Quechua, Colla, Kawésqar and Yamana (each group can metaphorically be considered an island). My idea of an island variable influencing intercultural health on Chiloé seemed short-lived.

Several themes emerged as to how the integration of the Williche Council of Chief's health program with public health care clinics was performed. The first two themes, (1) *Recognition of Indigenous Peoples by the State*, and (2) *Williche Council of Chiefs Commitment to Intercultural Health*, were mentioned when I asked why the public system wanted to work with the WCC health program (P.1). The remaining themes, (3) *Identity and Cultural Sustainability*, (4) *Recognition of Ancestral Wisdom* and (5) *Public Need for an Intercultural Complementary Health Program* are combinations of answers from both perspectives.[6] I did not necessarily receive two sets of responses by asking about the integration from two different perspectives. What emerged came to be more of a general display of reasons from the former perspective with more of an in-depth look at the interest in intercultural health emerging from the latter.

The first theme for the integration is that of the *Recognition of Indigenous Peoples by the State,* which includes the state's special program on indigenous people's health, as Arturo, a health administrator, explains:

> First there is a national program that is the special program of health of indigenous peoples. The program recommends the recognition of the existence of native peoples as part of Chilean society, but it goes beyond recognition in that it expresses the possibility that they make their own choices. The state of Chile does not abandon the duty of providing them with their own system of health care. Then as a way to better integrate, there must also be a recognition of the value of the Williche therapies, that they are accepted by the people. Therefore it is required to incorporate them, but still the state will do what it considers is best for this society, as part of Chilean society in general. Then it is decided through the health service, representative of the state, to support the Council of Chiefs

> because their vision is consistent with the spirit of the national program. There are other ingredients also, the Chilean state has recognized the validity of Convention 169 and therefore the state's duty to listen more to indigenous peoples is higher, the duty increases, becomes more stringent. (P. 1)[7]

This information encouraged me to further investigate what measures the Chilean state had undertaken to recognize the rights of its indigenous peoples and involve the concept of intercultural health into their framework. What I offer is in no way a complete history of the state's actions but a few key steps. According to the United Nations Economic and Social Council:

> In 1993, Chile adopted the Indigenous Peoples Act (Act No. 19,253), in which the State recognizes indigenous people as the descendants of human groups that have existed in national territory since pre-Colombian times and that have preserved their own forms of ethnic and cultural expression, the land being the principal foundation of their existence and culture. (2003:2)

The adoption of this act was the first time that Chile's government formally recognized the rights of indigenous people including those of participation, land, culture and development to overcome marginalization (Indigenous Peoples in Chile 2011).

Also in 1993, the Pan American Health Organization (PAHO), of which Chile is a member, "made a commitment to work with indigenous populations to improve their health and well-being, taking into consideration the indigenous groups' particular ancestral knowledge" (PAHO 2002:6). These two commitments appear to have led to the 1996 development of Chile's "Special Program for Health and Indigenous Peoples, dedicated to the generation of technical and policy guidance for intercultural health at the national level" (Ministerio de Salud 2006:15, my translation).[8] What I feel is one of the most important parts of this national program is stated in its purpose: "as a component of health, is to help rural indigenous communities of the Aymara, Mapuche, and Atacama improve the situation of their health by implementing *intercultural health models co-*

managed with the Health Services and the enhancement of the knowledge and health practices of indigenous peoples" (Ministerio de Salud 2006:16, my translation).

Ten years later, Chilean President Michelle Bachelet (2006 – 2010) undertook further steps to acknowledge and support the indigenous peoples of Chile by ratifying the International Labour Organization's *Indigenous and Tribal Peoples Convention, 1989* (No. 169) in September 2008. Part V of this convention includes Article 25, which speaks directly to the government's responsibility to provide either direct health services or the resources for indigenous peoples to create their own services (International Labour Organization 2012a). It is important to consider the work of these global bodies with Chiloe's policy on indigenous health in relation to the intercultural complementary health program in Chiloé. This program and others in Chile would not have come to fruition if it was not supported in some way by the state, international organizations and the global health body.

The second theme pertaining to why the integration happened, the *Williche Council of Chiefs Commitment to Intercultural Health*, was also mentioned in the introduction. By the time this ICHCP started, the Council was engaged in a dialogue with municipal, regional and federal health authorities on intercultural health for approximately 14 years. Their goal was to bring aspects from the Williche cosmology into the public system. The following passages are representative of a voice from each field site noting that the work of the Council could no longer be ignored:

> The project of the Council of Chiefs takes a very great importance, since they cover a large territory, working in several communities. They are representatives of the archipelago of Chiloé, you cannot overlook or ignore the importance they have, . . . not only in the field of health, if not all other aspects of daily life. Especially since the Williche have a holistic vision where all aspects of life affect health or have an influence on health, or are determinants of the state of health

> and that is very consistent with the vision that the Chilean state has. (P. 1 Arturo, health administrator)
>
> I think that partly they were convinced and partly because they were almost forced because the Council of Chiefs here was very organized and they strongly raised their ideas and purposes. (P. 1 María, public health practitioner)
>
> The visibility that has reached the [Council's health] program has done much to convince the authorities that it is important to follow ahead with this, and to collaborate in the process, . . . that it is not possible to be eluded. (P. 1 Pedro, WCC)

After many years of collaboration there is also the development of personal relationships. Two significant ones that I became aware of were that between members of the Council of Chiefs and the past Director of Health for the Lanquihue district (which at the time included Chiloé) and secondly with the director for the *Centros de Salud Familar* (CESFAM) [Family Health Centre] in Quellón, where the integration took place. If these key individuals were taken out of the equation, the results would have differed.

The third theme is that of *Identity and Cultural Sustainability,* which an individual in each field site addressed. The ICHCP was seen as a way for the Williche to maintain their identity as Williche people within their own health system, because as Ernesto, a health administrator, noted: "these people who are attended to, who are our beneficiaries, and are of indigenous descent, that they are not taken completely out of the model that they are used to" (P. 1). Isabel, a health practitioner was concerned about cultural sustainability in the long term and saw the program as a way to "empower the people with their culture, because what will happen if we don't do this? If the [Mapu Ñuke] team did not participate, we will continue delivering our drugs, and the people will come to a period when the grandmothers who know the most will die and they did not pass on their knowledge, and the culture will die" (P. 1). This idea that in the future there

may be no practitioners or keepers of indigenous knowledge has been circulating globally for years.[9] In addition to strengthening Williche identity, this program could also influence the area of public health as Pedro, member of the WCC stated: "one, it is to strengthen the identity of the Williche people of Chiloé, and the other is to promote the transversal approach of an intercultural focus in the space of the public health" (P. 2). These points suggest the idea that the integration could help the Williche retain aspects of their culture and to sustain their traditions over time. However, I would like to return to a key point from the beginning of this chapter: the institutionalization of indigenous healing technologies often leads to their biomedicalization.

The fourth theme, *Recognition of Ancestral Wisdom,* was articulated as a foundation that sustains the health system. Ricardo, a health administrator, felt it allowed the public health system "to have another vision of public health, where we should have all the actors involved, all the people involved so we can grant these people with a better quality of life" (P. 1). A member of the WCC health team, Ana, echoed this sentiment in that perhaps there was the realization "that the herbs are as good as any chemical that one takes, and a lot better because they do not cause damage" (P. 1). For Claudia, also a WCC therapist, the program existed because there was a necessity to "value the ancestral things, it is necessary to return to recovering the knowledge of the herbs, of the algae, of the self-care, . . . but more than anything it is to promote the self-care, the recovery of the ancestral information" (P. 2). Williche epistemological and ontological understandings of health have been challenged by European constructions for over 500 years. It seems that now, through this intercultural program they are receiving some vindication of their knowledge. Yet the power that controls much of their daily lives—Chilean

Government—can easily remove its support of indigenous people's health through the use of "bio-power" (Foucault 1990).

The final theme for the integration is that of the *Public Need for an Intercultural Complementary Health Care Program.* This theme deserves its own subsection, developed below, but for now I will highlight how this point was raised. "Users" of the ICHCP in Chiloé are for the most part divided between those who define themselves as Williche or Chilote, and some who would say they are both. One of the reasons why the Council wanted to have the ICHCP was because the Williche population has the "right to a place where health is developed according to their own worldview" (P. 2 Pedro). It also allows the Council's health team "to be able to attend to the people who come from the communities and for them to not pay anything. . . . we are strengthening the public system, it is our duty, because that is our right as well [to use the public system]" (P. 2 Pedro).

An interesting point that will be discussed in the next section is that this intercultural program drew in many people who were not Williche. Tensions exist between Chilotes—not just Williches—and the various practices associated with biomedicine. As discussed in the introduction, it is harder to identify the differences than the similarities between who is Williche and who is Chilote. Customs associated with being Chilote are also a part of what it means to be Williche and vice versa. The use of herbs, plants, trees, animal–fish parts and algae as remedies is common across the archipelago. The following three quotes portray an opinion from each of the three ethnographic sites on meeting the needs of the users:

> There are people that for example are not willing to undergo drug treatment and you can give them another possibility, . . . it is an alternative solution to the

> problems that they have. If for example, I feel much better taking a medicinal herb, and I believe in it, and trust that it will be good for me, and I believe that the therapies are good for me, then it is a different option to give to the people and that they choose their health, and not that they will leave with medicine and just accumulate the medicines, . . . but if I believe that it is better for me to take herbs or to come to the therapies, then it is giving a better quality of life to the people. (P. 1 Consuelo, public health therapist)
>
> I believe that it is because the people have a rejection towards them [doctors]. Because we use herbs, and here in Chiloé everyone knows about herbs, even though they may only have tried one herb, then for them it is much more familiar to take herbs than to take pills, the people have this reluctance, "I do not like the doctors," "I do not like the white aprons." (P. 1 Claudia, member of the CHT)
>
> We can say that we are giving full satisfaction to the demand of the users, . . . to grant another alternative of health to the persons, . . . where they could choose which is the best alternative of health. (Ricardo, health administrator)

I argue the idea that the public "needs" the integration of indigenous and biomedicine is a question of health care accessibility. This point is developed from my general experience in the archipelago as well as island studies literature (Capstick et al 2009; Galea et al. 2000; Lewis and Rapaport 1995). The biomedical system of health care is not always accessible on islands due to their geographical, economic or cultural situations. As noted in chapter one, a person who lives in a rural area of Chiloé or on one of the other islands may not have easy access to a clinic, be able to afford pharmaceutical drugs or even want to participate in a health system based upon a Western science model. Expert knowledges have been co-existing, but not an equal level, in Chile for centuries; however, through this intercultural complementary program they are articulated in new ways. The relationship between the Council of Chiefs and the Ministry of Health, along with the public health office in Chiloé, has evolved over time and will continue to do so. Of all the reasons why participants felt that the integration took place, the one that I find the most interesting, is that there was perceived to be a public need for a different

approach to health care. Due in part to the cultural, social and geographical characteristics within this archipelago— "there is a people with a different cultural reality . . . a different reality on the island" (Pedro, WCC).

"There is a Different Reality on the Island": Frictions With Biomedical Technologies and Chiloé

European health care has been provided by the Chilean state since the 19th century; in 1872 the first hospital was built. One could say that generally the Chilean population has been open to receiving the treatments, methods and overall technologies of this system, however there are pockets of the population that are closed to it. In Chiloé specifically, the rejection of biomedical technologies has meant that a portion of the population does not access state provided medical care. Margaret Lock and Vinh-Kim Nguyen describe these technologies as "the basic physical examination, patient history-taking (including self-examination and self-history taking), administration of injections and the prescription of medications" (2010:22). These technologies are the root of providing primary care along with the prevention and promotion of health.

The need for an alternative to biomedical technologies in Chiloé was apparent in 2007. People from the Williche communities, non-Williche Chilotes and people from the mainland of Chile would all come to the Council's health program at *Mapu Ñuke*. I started to realize how much of a conflict there was between Chilotes and biomedicine when I returned to the archipelago in 2010. While I did not ask about these tensions directly, it was quite serendipitous that four themes related to this cultural clash emerged from the data: (1) concerns with biomedical practices; (2) current everyday customs and

beliefs; (3) rejection of pharmaceutical drugs; and (4) a distrust of doctors and health authorities.

I would now like to discuss the concerns with biomedical practices because it highlights part of the cultural clash that has taken place between the expert knowledges of European and Williche cosmologies. One of the concerns with biomedicine was that it seemed to only try to treat the symptoms of an illness, as Claudia, a therapist with the WCC health team explains: "biomedicine attacks only the ailment." This was viewed as a negative attribute to biomedicine because the root cause of the problem is left unresolved—it did not provide healing in totality. It was felt that instead of looking for the cause of a problem, the ailment is addressed with a pharmaceutical prescription to alleviate symptoms. This approach can cause its own problems as Ana, also a member of the Council's health team stated: "we have to depend on the biomedicine, and even that has made us sicker." There appears to be a general worry with chemical "poisoning" from pharmaceuticals.

Time was also a concern as the biomedical model privileged quantity over quality—how many people can be seen by a doctor in a day. For Carlos, a member of the Council of Chiefs, this results in shorter consultation periods for "the typical medical attention, where they are attended for fifteen minutes, it is a cold and rigid situation." This notion of the biomedical system being cold and rigid was also applied to the physical space of clinics. In particular, the Williche health team felt uncomfortable at one public clinic. The clinic was large and designed more like a hospital; the interaction with the staff did not appear to be as open and friendly as at other clinics; and the appropriate space for the team to work out of was not always ready upon arrival. Finally, Pedro, a

member of the Council of Chiefs, suggested that the biomedical system "understood disease as a universal situation" and as there is a different reality on Chiloé, illness–disease is not seen to be universal. Universalization, as discussed in chapter one can be thought of as a bridge that leads to a "global dream space . . . Yet, we walk across that bridge and find ourselves, not everywhere, but somewhere in particular" (Tsing 2005:85). This is evident from my exploration of what disease–illness can mean in chapter two. The biomedical approach is too narrow to encompass the variety of illnesses in Chiloé. With opinions such as these it is no great surprise that there is a clash between the biomedical system and those who live within the Chiloé archipelago.

This view contributes towards the non-acceptance of biomedical technologies, as does the current set of customs and traditions practiced in everyday living. What I am specifically referring to are: the use of natural remedies, the social causes of illnesses and a Williche–Chilote reliance on their own healing technologies. These health technologies were discussed in chapter two as the reliance on herbs, bonesetters, massage and *machi* (spiritual healers). The use of common herbs, plants and seaweeds for both food and remedies is common across the archipelago. It flows in and out of both the rural and urban areas as well as Williche–Chilote homes. The following passage portrays the difficulty a health practitioner, Isabel, had in trying to convince one woman to use biomedical products:

> She has sores on her legs, really big wounds, so I said to her that I have some things which are very good and are of the latest technology and are super expensive. I can put them on you so you will heal quickly, and she did not want them, she did not agree, and so we went to the team [Mapu Ñuke]. With the cream of *matico*, and the drops of *ortiga*, the sores were making progress, but there was no case that was going to change the idea of how she was going to heal.

The social causes of illness encompass a variety of items as mentioned in the previous chapter. Doctors have a very difficult time with the self-diagnosis of *sustos*, and Chilotes have a difficult time talking to doctors about this ailment. Carl Taylor notes that this situation is common as:

> Scientifically trained health personnel working with traditional populations typically have difficulty communicating with rural people. . . . Each blames the other - doctors say that patients are stupid and superstitious, and patients say that doctors just do not care. . . . In addition to problems in understanding words and phrases, a more fundamental issue is that the basic patterns of meanings, interpretations, and expectations are different. (1976:290)

There is indeed a real dilemma here, Luis, a health administrator spoke of an unwillingness among Chilotes to go to doctors with these ailments because "they know that the professional will not believe them, or he–she will undervalue them" (8). Additionally, a public health care worker, Raymundo, noted that Chilotes feel that doctors cannot actually treat *sustos*:

> Enough people believe in the evil eye, the theme of sustos, and many times they tell you: "you have a *susto*, that can not be treated by doctors." Personally, I have my grandmother who is quite a believer in this type of pathology and sometimes she tells me that you can not go to a doctor to treat a *susto.*

The clash that is taking place here is not just one of miscommunication but misunderstanding—not just epistemology, but ontology. If doctors in Chile do not understand or acknowledge particular illnesses and the multiplicity of *enfermedad*, then how are they supposed to assist in healing?

This problem is not just faced in Chile but often where there is a multicultural society with one dominant medical system. Brown and Barrett (2010) refer to Anne Fadiman's *The Spirit Catches You and You Fall Down* to explain a similar situation in the United States. They feel the book expresses a cultural clash of beliefs between a Hmong

family and their daughter's American doctors. They further explain that medical anthropologists "have argued that increased cultural understanding and improved cross-cultural communication will improve health care outcomes for minority groups" (2010:284). What is different about the cross-cultural communication between these two cases, is that Chilotes are still in Chile. Yet, their cultural beliefs are not fully respected by the dominant medical authority—although there does seem to be some change with the work of the Council. This raises the point that biomedical doctors have a culture of their own, whether they originate from the United States, Spain, or Chile. I would not go so far to say that it is a single culture—there is a multiplicity to it—however, I argue that this medical culture is highly influenced by colonial health ideologies.

During interviews with participants, and while listening to the interviews with the users of the intercultural health program, two expressions caught my attention: "They," or "I don't want to take pills" and "They," or "I don't like doctors." Both of these statements speak for themselves; they also have a deeper meaning that needs to be unpacked. I was struck by the phrase "they don't want to take pills," because of its frequency and popularity with the elderly as Claudia, a therapist with the WCC health team, has explained:

> My grandmother had hypertension, but she never took her pills, because she did not like them and as a matter of fact when she died we found in her closet and under the bed, thousands of boxes of pills for her pressure. . . . my mom told me that when my grandmother was sick, she was going to the garden, she was looking for herbs and she would boil a lot of herbs and she was never going to the doctor because she did not like it. My grandfather, they took him to a doctor because he had, I believe pneumonia, but in opposition to his will, he did not want to [go].

The rejection of pharmaceuticals can occur because some prefer to use what they have at hand, including remedies they can make themselves or buy locally. The worry over the

chemical processing of pharmaceutical drugs and their side effects is also a concern of another member of the Council's health team, Ana:

> Herbs are much healthier, because you can take all the herbs that you want, the herbs are not going to poison you, but if you take 4 or 5 pills in one day, already in one year you have poisoned yourself with the pills . . . I have talked with many people who are being treated . . . they have said: "I was suffering terribly from gastritis, and with the pills I was poisoned. And now that I take herbs, I feel good, I feel rested, I feel light, or the stomach has changed 100%."

Side effects from pharmaceuticals were one of the reasons why users were either referred to the ICHCP or requested a referral. One user spoke of how she was suffering from depression and that the pills she was taking for this were causing her stomach problems, such as gastritis. That was why she came to the program; she wanted to use the Williche medicine. One public health worker, Raymundo, expressed his concern over the use of pharmaceuticals with children "because if a child is five or six years old, you cannot give them an antidepressant, or a child with sleeping problems. I argue with the doctors here, you can not give sertraline to a child who is 7 years old, or you can not give clonazepam."[10] Pharmaceuticals are just one example of a biomedical technology that is unable to reach a majority of the Chilote population—many people do not accept them. Of course, not all Chilotes reject pharmaceuticals, nevertheless there are enough of them who do that the following question should be raised: If the state is supposed to supply access to health care for the entire population of Chile, should the state facilitate a system which provides the kind of care the population desires? Even if it is more than one? In Chiloé, there appears to be a general rejection of pharmaceuticals and an unwillingness to go to doctors—an even more contentious issue.[11]

Earlier in this chapter I gave the example of a "user" of the Intercultural Complementary Health Care Program: Cecilia had been referred by a midwife and

commented on how she hadn't been to see a doctor for as long as she could remember. There is indeed mistrust towards doctors in Chiloé, it is connected with a mistrust toward the overall health authority. I found it interesting that it was only the doctors that people were adverse to, not nurses, midwives or psychologists—just doctors. Michel Foucault's work, discussed in chapter two, may offer an explanation. During the eighteenth century in Europe, the doctor started to be seen as a health ambassador of the State: "The doctor becomes the great advisor and expert, if not in the art of governing, at least in that of observing, correcting and improving the social "body" and maintaining it in a permanent state of health" (Foucault 1984c:284). Foucault also suggests that in the eyes of the psychiatric patient the "the doctor becomes a thaumaturge; the authority he has borrowed from order, morality, and the family now seems to derive from himself" (1984a:163). When Chilotes spoke of distrusting doctors I feel it was also a distrust of the biomedical system and the state. The role of the doctor encompasses one who can heal, is knowledgeable and an authority on health. When there is something disagreeable with either a health policy or practice issued by the state, it is the doctor who takes the blame. Within the biomedical system, the role of the doctor as healer and health authority are difficult to separate.

So why is it that Chilotes have this dislike of the "white aprons"? There are two key factors as indicated by interviewees: (1) persecution and discrimination of indigenous healing practices, including the non-acceptance of Williche ancestral remedies; and, (2) institutionalization of reproduction exemplified in the following quotes:

> When I started having my first children, after I was married, the doctors of that time they were not allowing that we should give them, . . . the water of *hinojo* that we have always used for babies, that we should not give them *hierba buena* or

> anything else, and that to auto-medicate a child with herbs was bad. (Ana, WCC health team)
>
> Reasons for this mistrust, they had to do with the persecution of the traditional knowledge system, the persecution of midwives, the persecution of indigenous doctors, the persecution of home birth and compulsory hospitalization assisted by the public force [police] to bring women out of their homes to give birth in the hospital. (Pedro, member of the WCC)
>
> Here in Chiloé with the surgeon Videla, who was going on the ship that went to the islands for health rounds, and he was tying the fallopian tubes of the women, without asking them if they wanted it or not, . . . "Do you want to have more children?"; - yes; - ahh that does not matter, because still we will tie the tubes and you are not going to have any more children. (Claudia, WCC health team)

The doctor–patient interaction has been criticized because of its hierarchical and vertical approach. In Chiloé, the mistreatment of women and their reproductive rights along with the discrimination of indigenous healing technologies are just two examples of the ways in which the relationship between doctor and patient are imbalanced. Something needs to change as Claudia explained:

> It is necessary that the attention in the doctor's offices *is more humane*, because the people here in Chiloé have a great reluctance to go to the doctors, because there have been very disagreeable situations which they lived through before. It is that the doctors are super impersonal, they arrive: "what hurts you? ": " - this "; "ok, take these pills, go."

Whether it was the Minister of Health or another health authority within the Chilean government that created health policies, it was the doctors who acted on them. If, as Foucault notes, the doctor was seen as a thaumaturge, I would argue that in Chiloé this image has been greatly shattered—if it ever existed.

To add to the "frictions" created through the encounters of biomedical practices–technologies and the people of Chiloé is the fact that similar "frictions" were (and are) experienced globally (Tsing 2005). I would like to turn to Margaret Lock and Vihn-Kim Nguyen on this matter, as they state at the

> turn of the 20th century . . . in many parts of the world the deployment of biomedicine was thought of as part of an oppressive colonial apparatus, and was often met with incomprehension, suspicion or even outright resistance. While colonial perceptions of biomedicine as a colonial tool to be avoided or resisted would gradually be overcome in many communities around the world, in others a legacy of mistrust of biomedicine as a "Western science" remains. (2010:154)

What has been described in the Chiloé archipelago is indeed a legacy of mistrust. It is based on understandings of the biomedical approach, a concern over the use of pharmaceuticals and interactions with the health authority, specifically with the persecution of indigenous healing technologies and institutionalization of reproduction. As well, the current customs in Chiloé—use of natural remedies, explanation of social etiologies and a reliance on their own healing technologies—are foreign to and often disapproved by biomedical practitioners. All of these frictions contribute to the public need for an intercultural complementary health care program. The biomedical system on its own does not meet the full range of health care needs in the archipelago. This reason alone is substantial enough to garner support for an intercultural program, which allows for health care to be distributed on a wider level and be more inclusive of the population's needs. Having said that, there is still the looming question of how an integration of two healing systems—each an expert knowledge with a universalizing pretention—can be balanced. I would now like to focus on a different approach to integrating health practices and return to the South Pacific.

Integration and Intervention of International Health Policies Now: Institutionalizing Indigenous Health Technologies in Oceania

Many Indigenous societies are known for their use of botanical knowledge for health and healing. These "traditional medicines" are the natural non-processed form of

many pharmaceutical drugs and can also include the practices of acupuncture, massage and other techniques. The efficacy of this knowledge has been the subject of debate in the Western scientific community, even though historically and currently the development of this knowledge for pharmaceutical practices is widely sought after (Hayden 2003).

During the colonial era "The medical modernization of native populations, via export of Western medical theories and practices, was part of the 'ideology of colonial healing', that justified colonialism as an ultimately humanitarian endeavour" (King 2002:765). From a post-colonial stance, I ask whether the ideology of colonial healing has changed over the centuries? Are the plans to *integrate* "traditional medicine" (TRM) and practices with national health plans another way of "modernizing" these technologies? Many indigenous communities are under the constant threat of having their practices biomedicalized (Waldram 2000:609). Yet the use of "traditional medicines" is widespread globally. In regards to its appeal Robinson and Zhang note that:

> Between 70% and 95% of citizens in a majority of developing countries, especially those in Asia, Africa, Latin America and the Middle East, use traditional medicine, . . . In some industrialized nations, use of traditional medication is equally significant; Canada, France, Germany and Italy for instance, report that between 70% and 90% of their populations have used traditional medicines. (2011:2)

Due to the global interest in IHT, there is now more than ever a pressure to create policies on regulating the use of IHT. This refers specifically to the ways in which herbal medicines are produced, packaged and sold.

From a post-colonial perspective it is important to question who creates these policies and guidelines? The World Health Organization and World Bank have certainly stepped forward in this regard. Throughout this section, I do question their intentions, which may be good but with negative effects. We are reminded that, "While multilateral

and non-governmental organizations were still in their infancy, international health issues were most commonly addressed in the context of colonialism, where the practical and ideological needs of the colonizing power governed the ideology of public health" (King 2002:765). Within the anthropological literature there is also critique of the processes and consequences of global health policies since political and economic relationships influence policy decisions (Janes and Corbett 2009). In order to show ways in which colonial health policies have influenced current global health policy, I return to Oceania and the "healthy islands" reports.

Situating Indigenous Medicinal Knowledges in Oceania in Space and Place

The importance of indigenous knowledge in the South Pacific stood out within some of the "healthy islands" meeting reports. Through these reports I have examined how the use of indigenous medicine was addressed and promoted. Encouragement from the body politic to create national policies on the use of TRM does raise some questions on the practicalities of how this would take place. In this section I draw most of the material from the meeting reports of the Health Ministers in the Pacific. In addition to this, I was also led to a WHO sponsored meeting on the use of traditional medicine in the South Pacific—*Apia Action Plan*—as well as a WHO global survey on the use of TRM (WHO 2005a). The combination of these sources has widened the scope of what and who is involved if there is to be an integration of IHT, as well the role of global connections in shaping policy.

In 1995, members of the first "healthy islands" meeting in Yanuca Island, Fiji, agreed "to investigate, analyse and document traditional and herbal medicines that can be

used in Pacific island countries" (WHO 1995:11). *The Rarontonga Agreement: Towards Healthy Islands* determined "to extend training in the practice of traditional medicine, especially herbal medicine, acupuncture and related practices" (WHO 1997:6). The use of indigenous medicine was a priority for this meeting, and according to the report, it "should be encouraged where appropriate. Steps should be taken to incorporate its use in the health care system" with WHO set to "continue to encourage incorporation of traditional medical practices into health systems in the Region" (WHO 1997:15). The incorporation of IHT into health care systems requires action and agreement on the level of the individual body, the social body and the body politic—politicians, health services, local practitioners, community groups and individuals—something that is not so easily achieved as I later discuss.

The meeting of health ministers from the South Pacific in 1999 produced the *Palau Action Statement On Healthy Islands* where TRM was a major topic. The importance of this meeting is that a program of action for the future was endorsed. Recommendations for participating countries and the WHO on the use of indigenous medicine were dictated as follows:

> COUNTRY ACTION
>
> 1. Where appropriate, governments need to develop policies in support of the proper use of traditional medicine.
> 2. Commonly used local plants with medicinal value should be selected and their proper use should be assessed and promoted.
> 3. Traditional medicine practitioners should be mobilized as community health providers:
>
> to provide training opportunities; and
> *to pass knowledge on traditional medicine on to health workers.*
>
> Traditional medicine practitioners should be included as members of the community health team.

> 4. The potential contribution of scientifically proven traditional medicine should be fully explored.
>
> WHO ACTION
>
> 1. *Collaborative research* should be conducted and should include surveys, assessments and feasibility studies on integration. Intercountry cooperation should be sought.
> 2. *Information exchange* should be facilitated and strengthened. (WHO 1999:5–6, emphasis added)

Among these recommendations I would like to highlight the topic of information exchange. This is reminiscent of the botanical science power-knowledge discussion in chapter two, as the transfer of "traditional" knowledge (and power with it) is a concern. Since colonial times, the West has been interested in transferring medical knowledge, both across Western nations and onto non-Western societies (King 2002). It appears that here again under the notion of "collaborative research," "information exchange," the passing on of knowledge, and the exploration for scientific proof of efficacy is an interest in transferring knowledge. Is the European quest for botanical knowledge merely being presented in a different way? Who is it that will gain power through the sharing of this knowledge or controlling it? It was also noted "traditional medicine has an important role to play in health care systems and should be encouraged under appropriate guidance" (WHO 1999:5). What constitutes appropriate guidance and who sets the guidelines are topics that should be examined.

Before I move on to the Ministers of Health meeting in 2001, I would like to draw attention to the *Apia Action Plan on Traditional Medicine in the Pacific Island Countries* (WHO 2001a). This plan arose out of a *WHO Regional Workshop on the Traditional Practice of Medicine and Health Sector Development* held in 2000.[12] The purpose of this workshop was to implement the recommendations from the *Palau Action Statement* on

the use of TRM. The first of two goals for the *Apia Action Plan* was to "encourage the integration of traditional medicine into the mainstream health service system" (WHO 2001a:6). As mentioned previously, in order for there to be an integration of indigenous medicine into the national health system, there needs to be agreement on both the sides of the government and practitioners. Several "players" are needed for this to happen. One of the obstacles to this integration, in some islands, is that governments do not fully support the practice of IHT.

Colonial health ideologies were, at the time of WHO's workshop, present in some Pacific Islands. In a few cases there were still tight ties to former colonial powers and their policies on health care. For example, islands such as New Caledonia and French Polynesia are presently aligned with French national policy. New Caledonia is a territorial collectivity and French Polynesia is an overseas collectivity of France. Both islands expressed that they follow "government policy that discourages the practice of TRM and its inclusion in the formal health care system" (WHO 2001a:71). For Vanuatu, which received formal independence from France and the United Kingdom in 1980, indigenous medicine was "not accepted in the hospitals where Western medicine is prescribed for free, thus, putting TRM practitioners at a disadvantage since they charge their patients for services and *their practice cannot be done openly*" (WHO 2001a:70). The island of Niue does not have full sovereignty; it is in free association with New Zealand. Their approach to indigenous medicine was that it is "practised secretly at home and is not a topic of public discussion" (WHO 2001a:71). While the practice of traditional medicine is present in Oceania, the devaluation of TRM by national powers was a roadblock in regards to accessibility.

The second goal of the *Apia Action Plan* was: "To promote the appropriate use of traditional medicine in Pacific Island countries" (WHO 2001a:6). The rationale being: "A national policy will ensure the proper use and safe practice of traditional medicine through establishment of mechanisms for *regulation and control* of traditional medicine and its practice" (WHO 2001a:8). Policies put forward through the *Apia Action Plan*, however, fly in the face of the tradition of indigenous knowledge. As stated in the introduction to the *Apia Action Plan*:

> Traditional medicine (TRM) in Pacific Islands is an old, ancestral health system which has remained practically unchanged for many centuries. . . . The healer's knowledge is considered a healing gift, being passed on by "word of mouth" from one generation to the next. Younger members of the family who are considered to be worthy are selected to receive the special gift. Ancient books or papyrus writings that document the uses of indigenous plant medicines and healing practices are rare to non-existent. (WHO 2001a:1)

Due to the nature of learning this knowledge, I see an imbalance in the approach taken to integrate IHT. In particular, I would like to refer to the second action statement of the Apia plan which addresses the "Selection, assessment and promotion of commonly used local plants with medical value" (WHO 2001a:26), and includes steps such as: gathering knowledge from indigenous healers which would require "Breaking the TRM practitioner's code of secrecy" (WHO 2001a:26); selecting only commonly used plants for the top illnesses, which would then be endorsed by the government; and the dissemination of knowledge publicly via:

> Training in the use of selected medicinal plants including their identification, cultivation, harvest, processing, storage, clinical indications, instructions of use, possible side-effects, and contraindications should be provided to community health workers, medical doctors, traditional medicine practitioners, school teachers, active women's groups and the public (WHO 2001a:33).

If policies are aligned with these steps it may have a negative effect on the practices of TRM. At the same time though I believe it is important for this information to be circulated. What becomes more important is how this is done, the praxis of knowledge sharing.

During the WHO workshop on the "Traditional Practice of Medicine," Samoan Minister Retzlaff commented on Samoan indigenous health practitioners being worried "about revealing their secrets because of fear of losing one's power" (WHO 2001a:77). These practitioners have a specific role in the social fabric of their community. A larger concern I have is that it appears through such policy there is only one aspect of an indigenous health system that is being integrated: the use of botanical knowledge. The cosmology (and context) behind a system is not included. This is a familiar trend with the biomedicalization of indigenous health technologies as Margaret Lock has argued:

> Despite the fact that public support for traditional medicine appears to be based upon support for *some of the distinctive features* of traditional medicine, institutionalized responses designed to broaden the legitimation of traditional medicine, in contrast, tend to be structured in such a way as to curtail many of the distinctive features of the traditional system. (1980: 251 my emphasis)

The steps I have highlighted from the *Apia Action Plan* are an example of how local practices of IHT are being threatened by a global quest to institutionalize and universalize them. The creation of policy on indigenous medicine in this sense is another form of the North "developing" the South. The question of how much influence actual practitioners of TRM will have in regards to the development of such policy is unknown. As Lee and Goodman have argued (Janes and Corbett), "the networks of so-called experts in global health tend to be fairly small but are positioned strategically to create and successfully advocate for solutions to key international agencies" (2009:174). Unfortunately, more

often than not, practitioners of TRM are not considered to be "experts." After the 2000 WHO workshop on the *Traditional Practice of Medicine and Health Sector Development* which led to the *Apia Action Plan*, the "healthy islands" meetings of the Ministers of Health in the South Pacific continued.

The next meeting of the Ministers of Health was in 2001. During this meeting the importance of the *Apia Action Plan* was noted. Recommendations regarding the use of TRM for countries involved and other international partners were put forward at this meeting. Nevertheless, this is the last "healthy islands" meeting where the subject of TRM was recorded in the meeting reports.[13] The subsequent reports from 2003–2009 did not include a section, nor even a sentence on the use of TRM. This is surprising given the WHO's and most, if not all, Pacific Island countries' commitment to increasing the use and practice of TRM. For me this exclusion raises two questions: (1) Why was the subject apparently excluded and, (2) What does this mean for the discussion of policy development on IHT and their integration in Oceania?

Without this discussion Pacific Island countries may be led into developing policies on the use of IHT that could hinder both intellectual property rights and the traditions of indigenous medicine. Over and over again the message that the WHO puts forward through the "healthy islands" meetings, the *Apia Action Plan* and other WHO office reports on TRM, is that IHT need to be institutionalized and integrated into national health care systems. As of 2005, many island countries in Oceania had begun to develop policies on the use of TRM or were in the process of doing so (WHO 2005a). The integration of IHT as a form of medical plurality could work in theory, however the praxis of the integration of two different medical systems is complicated, especially when

it may only be pieces of one system being absorbed in another. Additionally, we cannot assume that all systems in Oceania are the same. There could be large or small differences from island to island, or between Polynesia, Micronesia, and Melanesia. As we have seen, the relationship between the expert knowledges involved in medical plurality is often unbalanced; still, it is unlikely that global pressure to institutionalize IHT will simply fade away.

Neoliberalism and Economies of Knowledge

If local indigenous medicine has been seen in both the present and recent past as a "rejected knowledge," what has changed to garner its inclusion into national health care systems (Waldram 2000)? Why has there been such a strong push for the integration and institutionalization of indigenous medicine? Is it because indigenous medicine is now valued? Tongans "wryly point out that they have always known how to make medicines, while only recently the more 'advanced' countries are discovering the value of plants and herbs in the treatment of disease" (McGrath 1999:490). While the Tongans value plants and herbs for their efficacy in healing, these 'advanced' countries may be more likely to value them from an economic standpoint, as the "global market for traditional medicines was estimated at US$ 83 billion annually in 2008, with a rate of increase that has been exponential" (Robinson and Zhang: 2011:1).

Does a cure for a type of cancer or diabetes exist in an endangered plant in the Amazon rain forest? A question like this is asked by pharmaceutical industries and probably more frequently now as the market for "traditional medicines" is growing

(Robinson and Zhang 2011). Cori Hayden's work with bioprospecting in Mexico highlights how:

> Before the middle of the twentieth century, most drug development started with plant compounds; in fact plants, as well as the specialized knowledge of healers, widely diffused folk knowledge, and the work of indigenous guides and translators, have been central to some of the most ubiquitous and–or profitable drugs in use in Northern and international markets. (2003:54)

From an economic standpoint indigenous knowledge is greatly valued by Northern science, whether scientists and medical doctors admit it or not. However, for it to be fully accepted by global health bodies, indigenous medicine has to meet the criteria of "internationally acceptable guidelines and technical standards and also evidence based information . . . [for] formulating policy and regulations to control the safety, efficacy and quality of traditional medicines" (WHO 2005a:6). These regulations and policy will no doubt be forged by "first world" states and international organizations. The global health body is an "epistemic community" which has "loose networks of actors that develop common frameworks of knowledge, values, and beliefs that underlie configurations of public health policy and action" (Janes and Corbett 2009:174). This community contributes to the imbalance between the expert knowledges involved in the integration of IHT.

There is a double standard being applied to indigenous medicinal knowledge. On the one hand it is being treated as a "pre-modern" technology that has to undergo institutionalization via a western scientific approach to prove its safety and efficacy. At the same time, this knowledge is prized and sought after in the raw form for the economic gains it can provide. These benefits come in the form of patents and intellectual property rights from drug discoveries. According to Etzkowitz and Webster (Hayden), "the world

economy has embarked upon a new stage of economic growth with knowledge and therefore intellectual property as the engine of industrial development, replacing traditional elements such as monetary capital, natural resources, and land as the driving force" (2003:23). I would argue though, that this quest for knowledge is not a new but an old path that has been in circulation since colonial times (and probably much earlier than that). As mentioned in chapter two, the collection of botanical knowledge fuelled a global sense of universal knowledge. All too often the use of a plant or herb by indigenous communities has been appropriated with little to no benefits, or returns to community members who are the primary holders of this knowledge—it is their science. This act has often been referred to as biopiracy.[14] Measures put in place to prevent biopiracy, such as the "fair and equitable sharing of the benefits arising out of the utilization of genetic resources has become a major stumbling block in international biodiversity negotiations" (Ross 2010:22). Is this what happens when indigenous knowledge is valued from a neoliberal perspective?

The types of collaborations or partnerships that are forged through global assemblages and the circulation of knowledge is taken up by both Anna Tsing and Cori Hayden. Tsing illuminates how: "Collaborations create *new* interests and identities, but not to everyone's benefit. In standardizing global knowledge, for example, truths that are incompatible are suppressed. Globally circulating knowledge creates new gaps even as it grows through the frictions of encounter" (2005:13). The drive by global health bodies to institutionalize IHT is an example of such collaboration. In the *WHO Global Survey on the Regulation of Traditional Medicine (TM) and Complementary–Alternative Medicine (CAM) and the Regulation of Herbal Medicines* (2005b), there was a question on whether

or not member states had a pharmacopoeia (formulary) or monographs that included herbal medicine. As Cori Hayden notes, "it is precisely the acts of classification and cataloguing that will make a nation's plants and animals more accessible to foreign researchers and industry — and thus more appealing as an investment" (2003:57).

New interests created in neoliberal economies can be seen in how both the "World Bank and the WHO have signed documents making it clear that these organizations are in support of the systematic utilization of plant, animal, and mineral products used by traditional healers for pharmaceutical research and possible drug development" (Lock and Nguyen 2010:65). There were ten Pacific Island countries involved in the WHO survey (2005b), all of who have participated in the regional "healthy islands" meetings. This brings me back to an earlier question, if Pacific Islands and the WHO are concerned with institutionalizing traditional medicine, why has it not been in any of the "healthy islands" meeting reports after 2001?

The incompatible truths are the value placed on indigenous botanical knowledge—and indigenous people's genomes—from a Western and Asian economic perspective and how it is denigrated from a biomedical perspective—a revolving colonial ideology. At first, I felt this relationship was quite odd in that biomedicine relies on the use of pharmaceuticals, which is rooted in indigenous healing systems. But then I thought of the ways in which knowledge is circulated and practiced. Has Western science not developed a pattern of misappropriating knowledge? What value is ever given to indigenous knowledge? The answer from a Neoliberal approach seems to be the processing and industrializing of botanical knowledge through Western–Northern science. The plant itself has to be "modernized" in order for it to be used by "modern"

science—biomedicine. Therefore, it does not matter where the knowledge came from, but what was done with it, and who did it—another example of the relationship between power and knowledge, and the importance of studying the praxiographic.

Interventions into health in Oceania, as discussed in chapter one, showed how colonial ideologies permeated Pacific Island culture. The ontologies of these practices—the ways of doing them—are still present, they have taken different forms, but the overarching ideologies have not changed significantly. Colonial health policies have informed current-day governments' policies on health care, both inside and out of Oceania. The overall themes of "development" have never accepted the technologies of the South on their own terms: "From its beginnings, development was conceptualized as achievable only through the transfer to the South of Northern scientific rationality and technical expertise and the democratic political forms that these purportedly bring into existence and are, in turn, supported by" (Harding 2008:142). I feel the institutionalization of IHT in Oceania, is an example of: (1) the North trying to develop the South; and, (2) is reminiscent of colonial approaches to controlling global knowledge.

Conclusion

The examples I have drawn on in this chapter speak to the current relationship between colonial health ideologies and global health policy. As discussed in chapter one, early colonial health policy symbolized the "ambit of state control" (Thomas 1994:124). While colonial health ideologies persist now, there is a difference in that global bodies (health organizations) and actions (trading laws) also extend this arm of control. This becomes a concern when we examine the institutionalization of indigenous medicine

through the global assemblages of colonialism and neoliberalism.

In the eighteenth century, it became "necessary to organize the internal space of the hospital so as to make it medically efficacious, a place no longer of assistance but of therapeutic action" (Foucault 1984c:287). Is it now desired to organize the space and place of indigenous healing technologies to increase their effectiveness? Again, who decides what is the most effective manner of organization is a question of power-knowledge—which expert knowledge would have this power? Furthermore it is not just expert knowledges that are in question but also which body—individual, social, or political? In an era of "globalization" these questions need serious consideration.

There are many reasons why the integration of IHT into national health care systems is encouraged. In Chiloé, it is to meet the needs of the population and to supply a level of care that is culturally appropriate. Tongans may believe it is because the rest of the world has finally realized the importance of plants and herbs (McGrath 1999). For Robinson and Zhang it is based on business, for with public purchases of medicinal herbs consumers want a reliable product, and it is "one way to reduce the health care burden on the public budget" (2011:3). Then there is also the point that Nicholas King (2002) made in the introduction: Colonialism sought to *convert* indigenous medical practices into biomedical ones; in an era of post-colonialism it is a path of *integration* that leads this ideology. The power struggle to collect and control ethno-botanical knowledge is a very important piece to understanding the practices included in medical plurality.

I propose that Nicholas Thomas's (1994) earlier example of South Pacific village amalgamation, which came under health and sanitation policy but was used as a means for control, is in some ways parallel to the institutionalization of indigenous medicine. If

we think about the examples given in this chapter, from the South Pacific, on where indigenous medicine is practiced (in the home), how it is practiced (in secrecy), and who does it (community members), then we realize that the *space* of indigenous medicine is largely inaccessible to the body politic and global health bodies. By implementing regulations on the use of indigenous medicine, these bodies are still trying to supplant the "disorder and irregularity of the past" and control the *place* of IHT (Thomas 1994:123).

These power struggles over ethno-botanical knowledge are part of a larger history of technologies of power over life and death. Foucault has illustrated that "power is situated and exercised at the level of life, the species, the race, and the large-scale phenomena of population" (1990:137). The state may use certain technologies to discipline bodies and control populations, which he refers to as "bio-power" (Foucault 1990:140). Caught up in the desire to control life and death is the art of healing. Whoever has the power to heal has the power of granting life over death. This line of thinking raises two questions: (1) What happens in cases like Nauru, where the state has essentially lost its control over the health of the population? (2) If the state does have the power to control the health of populations, then what is its responsibility to provide accessible health care? These lines become messy when neoliberal economies and ideologies are attached to health care.

The institutionalization of the Williche Council of Chiefs' health system is a different, although similar, story to that of the South Pacific. The global health body certainly played a part in Chile's policy on the health of indigenous peoples. But the stronger role was that of the Williche Council of Chiefs and the local family clinics. Their desire to change the public health system by integrating aspects of Williche cosmology is

one way to achieve intercultural health. Mind you, there is some of the opinion that there is no integration in Chiloé because of the way in which the Intercultural Complementary Health Care Program is performed, which I discuss in the conclusion to this thesis. Even so, the implementation of this program seems to have introduced a more balanced relationship between the expert knowledges involved in and practices of health care.

Whether or not there is an island variable to the integration on Chiloé is still unclear. The ICHCP cannot be separated from the Williche Council of Chiefs who represents and connects the archipelago. It is clear that the personal connections and unique culture of the island definitely contributed to the integration. Chilotes within the health authority wanted an intercultural program; they saw the value of incorporating local beliefs and knowledge, and of encouraging the use of Williche ancestral medicine and cosmology. The island variable may be apparent here in that "small size makes for social compression, stronger personal contacts and wider role enlargement, role diffusion and role multiplicity. These factors in turn make for a particular pattern of human interaction" (Baldacchino 2000:73). There is indeed a different reality on the island and perhaps the need for an intercultural approach was more evident as the relationship between health, economy and environment is clearer on islands (Nutbeam 1996).

The need for a medically plural system of health care is visible around the world, not just on the islands I have drawn from. However, the intervention into, and integration of IHT can lead to their institutionalization and therefore biomedicalization. How then can these expert knowledges ever reach a state of *Küme Mogen Rüpü*? Can the boundaries between these islands of medicine be crossed in such a way that balance is brought to the praxis of medical plurality?

Notes

1. Pressure may also be applied by "patients" to adapt biomedical technologies.

2. Fundación para la Superación de la Pobreza [Foundation to Overcome Poverty], the University of Chile and the Ford Foundation.

3. Anna Tsing (2005) points out that all epistemologies are universals in theory; they can be used to control or liberate.

4. During the intercultural complementary program, the Council's own health program was still being held in their community centre once a month.

5. Previously Chiloé health was under the province of Llanquihue, mainland Chile. In 2010 it had just recently received its own Director of Health, solely for the archipelago.

6. In order to clarify whether it was P.1 or P. 2 that led to an answer, after each quote I have noted if it was from P. 1 or P. 2.

7. International Labour Organization's *Indigenous and Tribal Peoples Convention, 1989* (No. 169) is an agreement to give indigenous peoples the opportunity "to exercise control over their own institutions, ways of life and economic development and to maintain and develop their identities, languages and religions, within the framework of the States in which they live" (International Labour Organization 2012b).

8. As noted in the introduction, it was in 1995–96 that the Williche Council of Chiefs and other indigenous people in Chile were protesting the human genome project. This no doubt played into the creation of a special national program on indigenous peoples health.

9. James Clifford refers to ethnographic processes that attempt to address disappearing objects as "salvage allegory" (1986b:113). He cautions against the notion that something as essential as culture can vanish with rapid change.

10. Clonazepam falls under the category of benzodiazepines, which are used for seizures or panic disorder. There have been warnings of suicidal thoughts with the use of clonazepam, see: http://www.drugs.com/clonazepam.html
Sertraline is an antidepressant and used for panic attacks; it also has a suicidal warning with children and youth up to 24 years of age, see: http://www.nlm.nih.gov/medlineplus/druginfo/meds/a697048.html

11. During an interview with one member of the WCC, Pedro, I was informed that the Council wants Williche people to be able to visit a doctor; the Council can not be solely responsible for people's health—they have a wide variety of issues to contend with. The idea is that doctors would become culturally sensitive and adopt Williche cosmology into their work. The method of needing a referral, in order to see the Council's health team, helped the Council in that people had to go to a doctor, nurse, midwife (etc). Pedro noted

that they consider it progress when a Williche person asks to see a doctor; they are exercising their right to use the health system and view the public system in a positive way.

12. Attendees of this workshop included "health administrators, policy makers, professional health workers and traditional medicine practitioners from 15 Pacific island countries" (WHO 2001a:5).

13. I want to clarify that I have no way of knowing whether or not the subject of traditional medicine was discussed in any of the following "healthy islands" meetings up to 2009. I can only go by what is reflected in the meeting reports and these do not contain any reference to the use of traditional medicine in the South Pacific.

14. As defined by an organization based in Ottawa, Canada, the ETC Group (Ross) sees biopiracy as "the appropriation of the knowledge and genetic resources of farming and indigenous communities by individuals or institutions who seek exclusive monopoly control (patents or intellectual property) over these resources and knowledge" (2010:22).

Küme Mogen Rüpü: A Path to Building Bridges Between Islands of Medicine

It is imperative to recognize that there is indeed a connection between "economic development, environmental management, and health promotion"; that this relationship is illuminated through an "island imagination" (Nutbeam 1996:263). Exploring the triad of health, economy and environment has revealed that the economy should consider ways to positively influence both the health of individuals and the environment on islands. This study has taught me that one way to improve and maintain the health of island populations (and mainlands too), is to centre health care systems on the needs of the individual body at the local level. This can occur with support from the individual and social body, along with the body politic, so that a path to balance for island life can be imagined (Williche Ancestral Knowledge). There is a tendency to assume there is a boundedness of both islands and knowledge. What I have come to realize is that the relationality of islands to mainlands, local(s) to global(s) and western science to indigenous knowledges need further attention.

In some cases islands and mainlands are of the same land, the same continent; it is just that they are connected via water at the surface level. They are then certainly related geographically. Then there are other islands—oceanic islands—that have no geographical connection to a mainland. Whether an island is oceanic or continental, there is a human relationship to continents via imperial powers. There is an economic relationship with the global economic market, world trade agreements and loans from financially powerful

nations. On these islands, health promotion is tied to global viruses and international health policies. And finally, natural resources and ecosystems are connected via tourism, trade, and disaster.

The local and the global are not on two different ends of a spectrum but are in a continuous dance with each other, where old partners tire and new partners are constantly introduced. At times there is a passion between the expert knowledge of the local and the one that desires to be global, one spinning the other, each caught up in the momentum. As they make their interaction through space, the pace and friction speed up, increasing the chance of stumbling. The pair needs to work with each other in order to maintain the pace and intricate movements, otherwise they will become out of sync with each other. The construction of bounded knowledge, "truth," is ever present; along with it comes an understanding of what fits and what does not. Yet there is also a relational aspect between expert knowledges: they did not just rise up or get pushed down on their own, there were–are interactions between them.

Addressing the Research Questions

This thesis began with the Williche Council of Chief's realization that they needed to make a change in how health care was being visualized and practiced within their territory, the Chiloé archipelago. The global assemblage of the human genome diversity project helped spur the Council into a conversation of health with Chilean authorities. Both the actions of the HGP and HGDP, and the reactions from indigenous people globally created those "awkward, unequal, unstable, and creative qualities of interconnection across difference" that pushed the Council to develop their own health

program (Tsing 2005:4). Connections have been drawn with how global assemblages and the body politic influence the space and place of medical plurality, individual well-being, and practices of health care ontologies on islands.

The space and place of medical plurality on islands is the research question that interested me from the very beginning of my ethnographic study. What I have drawn attention to is how colonial health ideologies, through the practices of biomedicine, continue to acculturate indigenous healing systems. Balancing a system of two or more health paradigms requires a relationship of sharing among expert knowledges involved. There is no perfect system of medical plurality; even the local approach in Chiloé is not without its faults. Nevertheless, the example of Chiloé's ICHCP is important because it shows us one "particular" way in which the islands of medicine can be bridged. It is an attempt at bringing balance into practice.

From my experience in Chiloé and what I was told, there were several strengths and challenges to the ICHCP. The strengths of this program speak to its necessity and effectiveness; the most direct is its impact on individual health. Many who were referred to the program came back for subsequent treatments and remedies. As Luis, a health administrator noted, the satisfaction of the public is "the principal impact that we have measured." Claudia, a member of the CHT, explained public gratification for the WCC health program as she recounted the story of a young girl:

> A girl named Soledad, who is about 15 years old, she was attended at [one of the clinics involved in the ICHCP] and has had depression for a long time, she is taking drugs such as clonazepam, paroxetine, and things like that. Then all day long she is doped up, all day on the same line, because she was taking a lot of pills for her depression. We attended to her with the flower essences and herbs, and the following month when she came she was different, she had life again. Then the mother tells us that she is super happy because now Soledad has returned to how she used to be. She is no longer taking pills and not intoxicating

> her body with chemicals. She took about four months of treatment and she is really good, then this is what the people are grateful for, and the lady [mother] says to us: "if I have to wait for four hours, I'll wait and I do not care because Soledad is better, and she had no panic attacks."

The effectiveness of the program was also seen to strengthen the Williche culture, as Isabel a public health practitioner phrased it: "a positive impact of recovery, incorporation, acceptance—from the user to the [health] team, from us to the user."

After the integration of the *Küme Mogen Rüpü* program, several public health workers informed me that they had a better understanding of not only Williche people but what intercultural health is. For María, it "opened the way you see health," to see how the family life and community affect health. Angélica spoke of how the CHT was able to discover an individual's health problems; ones those public health workers were unaware of. The importance of the program for Raymundo was that it created "new standards and ethics, these [cultural] conditions are respected, so when people say that they have a scare or the evil eye, they are referred to Mapu Ñuke or an alternative. . . . no one laughs at a patient who comes in." These examples speak to an objective of the WCC's health program: to influence the public health system.

An important challenge to the ICHCP is the WCC health team's experience with the public clinics. The health team preferred the atmosphere and energy of their own centre over the clinics. They often felt uncomfortable at these public clinics, aside from one. The interactions between the doctors and staff were too hierarchical for the CHT. In *Mapu Ñuke* the therapists, staff and users were treated equally. The CHT was expecting to have a circle of conversation with the various health practitioners. Instead they found in most cases once a user was referred to the ICHCP, the health practitioner was finished with that individual—it was "off their plate" (Claudia, CHT). The idea of having the

CHT and public health workers eating lunch together only occurred with frequency in one clinic.

The logistics of the CHT having to travel to the public clinics for the integration brought the opinion that there really was no integration, as Eduardo a member of the Council's health team, states:

> First there is no integration, no, for me it doesn't exist, . . . there are good intentions, but it still has not happened for me, personally because in the moment that integration is achieved we will have people from [one of the public clinics] here, supporting our daily lives, our health attention, we will have a social worker, a doctor, a dentist, our therapists are going to be there too, to complement what is being done today.

As previously noted, when there is integration between indigenous health technologies and western technologies, there is often a biomedicalization of IHT (Lock 1980; Lock and Nguyen 2010). Biomedical practices were adopted to a certain extent by the CHT such as, calling doctors and patients by these titles and not their personal name; calling the Williche remedies "medicine"; and allotting 20 minutes for therapies in the clinics, where in *Mapu Ñuke* there is no real time limit.

Some felt the program should be spending more time in Williche communities, as it did in the past, instead of the public clinics. While the communities that host the ICHCP do have a large Williche population, what became apparent was the number of non-Williche people partaking in the ICHCP. Many with referrals claimed no Williche ancestry and a noticeable amount of the staff at one clinic were getting appointments for themselves or family members without referrals. In addition to this concern, Ana, who worked for the CHT, expressed her thoughts over the importance of the program visiting the communities: "because I feel that at some moment this program is going to finish, because they are going to take what we started doing, it is going to be taken by the same

personnel that is employed at the doctor's offices and we are going to disappear."

The remaining challenges were on an organizational level, such as keeping the stock of Williche remedies, individuals having a referral, appropriate space allocated for the CHT in the clinics, and not having an overflow of first time individuals over those who needed follow-up. These challenges speak to the difficulty of maintaining a balance or achieving *Küme Mogen Rüpü* within the ICHCP. As this was a relatively new program the strengths of the integration far outweigh the challenges.

In the larger picture it is hoped that the use of Williche medicine by non-Williche people will have an effect on the relationships between these two groups. Pedro, a member of the Williche Council of Chiefs, notes that the program can "have a very strong impact on the change of attitudes, and that transforms the racist actions, transforms the relationship with diversity, transforms the hearts of people." This transformation is possible through the means of intercultural health. It is not just trying to standardize the use of indigenous medicine, as is the focus in Oceania, rather it wants to share the Williche way of being in health. The idea, as clarified by Carlos, also a member of the Council, is to "accept and share health, not to impose it, rather, share it. Respect the health or identity of each person, his–her own culture and thought, in an individual and collective way." By respecting common illnesses and their etiologies, in addition to offering a wide range of therapies, the WCC health program increases the accessibility of health care within the archipelago.

In the introduction I argued that the integration of IHT into national health care systems should be done in a way that respects the practices and practitioners of IHT, enabling them to blend these practices on their own terms. The WCC with local and

regional health authorities tried to implement a horizontal approach to health, e.g., where an individual is able to go back and forth between the therapies available, and one technique is not seen to dominate another. There was a sharing of how "health" can be done. In contrast, the integration of TRM as promoted by the WHO through the "healthy islands" meetings—e.g., the Apia Action Plan on Traditional Medicine in the Pacific Island Countries, 2001; the National Policy on Traditional Medicine and Regulation of Herbal Medicines, 2005; and, the Sixty-second World Health Assembly resolution on Traditional Medicine, WHA62.13—imposes their ideals, policies and regulations on both national governments and practitioners of TRM. This approach is very vertical and focuses largely on the institutionalization of herbal medicines instead of bringing together practitioners of TRM and biomedicine. It does not support the integration of two systems. It is a continuation of the unidirectional bridge, the north developing the south, and it is imbalanced.

The severity of NCD that I witnessed in Chiloé and read about in the "healthy islands" meeting reports was startling. The utopian ideal of the "healthy island" becomes greatly distorted by the reality of the situation. What was surprising were the similarities between Chiloé and South Pacific Islands: their relation to colonial illnesses and health policies; the current health challenges they are facing; and attempts to balance expert health care knowledges. Just as the study of *bruxismo* or *sustos* would create an awareness of how Chilote culture, history, society and current daily stresses influence health, I believe similar studies of local illnesses in the South Pacific would also give a new understanding to health and illness in these islands. How global assemblages influence local ontologies as practices and individual health became the research question

that emerged from these patterns.

The use of the "island imagination" was applicable to examining this question, as on smaller islands the relationship among health, the economy, and environment is much clearer; it is linked in a more tangible way (Nutbeam 1996). By applying this theory to the data, I could understand the link of this triad on islands. The processes of natural resource extraction in Nauru, free trade agreements in much of Oceania and the aquaculture industry in Chiloé all impacted either the physical or mental health of the population and the ecosystem. A common thread in these cases was the work of neoliberal economies, which in some examples increased the difficulty of an island state's ability to practice "healthy islands" policy. The importance of this connection is that a neoliberal approach to health places the responsibility solely on the individual, even though neoliberal economies influence the health of the individual body (Ong 2006; Lock and Nguyen 2010).

The second global assemblage, colonialism, has affected the physical health of islanders, as well as the ontologies and practices of health care. The discourse of post-colonial theory aided my understanding of how so many islands are subject to the "double burden" of communicable and noncommunicable diseases. Themes of intervention, integration and institutionalization are central to understanding the ways colonialism shapes medical plurality on islands. The attempt to universalize Euro-American conceptions of "health," while erasing all others, dates back to the "voyages of discovery." As explained in chapter one, colonial control of Pacific Island populations took place through the use of health and sanitation policy, which contradictorily also increased the spread of disease (Thomas 1994; Denoon 1997).

Throughout this thesis I have made the point that the link between colonial health ideologies and global health policy was not severed with the formal end of colonialism (King 2002; Harding 2008). Biomedical technologies and practices continued to grow globally affecting health care ontologies. The cultural constructions of biomedicine—shaped by a biological paradigm—are particular practices, that *through* power relations claim universality—with the illusion of being applicable to all other medical systems or trumping them (Tsing 2005; Bamford 2007; Waldram 2000). This becomes problematic, as biomedicine alone is unable to meet the variety of health care needs on Chiloé (and globally in general). Practices of medical plurality or intercultural health become a question of accessible health care.

The global assemblages of colonialism and neoliberal economies have moulded the spaces and places of medical plurality on islands. Through colonialism the global spread of biomedical practices and technologies was achieved. Simultaneously, non-biomedical health technologies were being minimized and discredited. The space and place of indigenous health systems was relegated to the home or completely forbidden by the state. This is currently changing in part because neoliberal economies have opened up free trade agreements and altered the rights to patent intellectual property. Both of these methods make the collection and distribution of herbal remedies more accessible and desirable, as the global market for indigenous medicine has increased.

Powerful international health organizations such as the WHO and World Bank have endorsed the institutionalization of some indigenous health technologies—but not indigenous health systems as a whole—for drug development (Lock & Nguyen 2010). This approach means the place of indigenous technologies is growing in the hands of

pharmaceutical chemists. Its space is increasingly moving from the home into the laboratory. This movement is not happening for the first time, as there has always been a "dependence of the development of Northern sciences upon Northern imperialism and colonialism" (Harding 2008:138). Moreover, the integration of indigenous knowledge is taking place in such a way that it is still "othered" to a "modern" medical system (Said 1979). If herbs are transformed by Euro-American means, they become "modernized" and can then be been sold to Euro-American populations whilst crediting Euro-American science and technologies. There are two problems with this: (1) proper credit and value is not given to indigenous knowledge; (2) this form of medical plurality only "shares" one part of indigenous knowledge systems—their technology. As was shown first hand in Chiloé, the use of pharmaceuticals is unable to solve all health problems. There needs to be a shift in the way health, illness, and curing are thought of and practiced within the biomedical tradition. If indigenous technologies are going to be adapted into a federal or national health system, then they should not be taken out of the cultural context in which they are used. The most effective form of medical plurality is when both expert knowledges are equally contributing to the relationship and have the individual's needs at the centre.

The influence of colonialism on individual bodies and the body politic is ever present in both the illnesses people have and the policies that govern health care. Colonial discourse has informed and continues to shape global health policy. The rise of NCD does not have the same meaning on islands as it does on mainlands, the same in the third world as it does in the first, nor does it mean the same thing to women as it does to men. If we think of islands as Epeli Hau'ofa suggests—a sea of islands—then health and

globalization are "seen in the totality of their relationships" (1993:7). Aihwa Ong and Stephen Collier suggest, "globalization might be conceived not as a process of secular transformation *per se* but as a problem-space in which contemporary anthropological questions are framed" (2005:5). The problem-space of globalization that is of primary interest in this thesis is how (1) the global economy seeks the contribution–control of indigenous health knowledge—through biopiracy or institutionalization of IHT—while (2) the global system of biomedicine either devalues or dismisses it. This is a problem for those who practice and rely on IHT and it points to the imbalance of expert knowledges involved in medical plurality.

Alternative Possibilities and Recommendations

Given the scope of my ethnographic work there were several themes that could have been developed. Discussion of the "healthy islands" meeting reports became larger than anticipated. This body of work could have been substituted for other theoretical literature or more primary data. Two areas of inquiry that I was unable to fit into this thesis were: whether or not the interviewees felt that there was a connection between living on an island and one's health; and the experience of being a "user" of the ICHCP. The former topic I did ask participants and the latter was an unexplored area that would have required a different tactic and change in ethics. The timing of my fieldwork, unbeknownst to me when I arrived, allowed for the study of the integration of the WCC health program with the public clinics at a key point in time. This program has changed drastically since June 2010. What I have presented is a snapshot of how the program looked during the four months I was in Chiloé. As of 2013 the Williche Council of Chiefs

still has a health team, although some members have changed. There is an ongoing intercultural program with various public clinics in the archipelago but it is not run to the same extent as it was in 2010.

One recommendation I would make is to carry out a practical application of Don Nutbeam's theory (1996), e.g., to conduct a needs assessment of what would need to happen and what the possible outcomes could be, if an island economy focused on creating positive change for the health of the population and the environment. This would have to have a knowledge integration and translation aspect where the expert knowledges, such as those of indigenous peoples living on an island, would be involved. A study such as this may provide direction towards achieving a path to balance.

Given the nature of this research study, it is appropriate and expected to give back to the community. Manuel Muñoz and I have discussed both a co-authored paper and a community report for the purposes of knowledge translation. I also plan to return to Chiloé at some point, to either discuss these findings, or simply to visit the people who became my friends and family.

Can Bridges Bring Balance?

The "bridging" of islands has been occurring for a long time in numerous ways, however this bridging can be problematic. Actual bridges such as the one proposed in 2006—but never built—to link Chiloé Island to the mainland, caused great social conflict (Reid 2006; Rohter 2006; Bunting 2008). Figurative bridges can also be controversial, including ones that transport "universal" knowledge systems. These links can be built on "universal truths," thus creating a dream space where a particular can be, and often is,

posed as a universal (Tsing 2005). The example I gave of the "voyages of discovery" illustrates this point: the introduction of colonial health ideologies to colonized places had disastrous effects on local ontologies and epistemologies. Dream spaces are an area island studies scholars are quite familiar with as islands have been type cast as utopias.

Linkages between local–global, specific–universal, and indigenous–western are often created through the circulation of power–knowledge. Each of these binaries can be considered a pair of islands. As expressed earlier in this thesis, the relationship among these binaries is problematic because each "island" in the pair is thought of as a singular bounded entity, as islands themselves often are. Therefore, the bridging that takes place can be portrayed as being unidirectional or vertical, the north developing the south, the mainland developing the island. However, as shown with the history of ethnobotanical knowledge, information did indeed travel in the opposite direction, from the colonized to the colonizers. Bridges are multiple, they can also connect boundaries in a positive way. By questioning the connections among these "islands" I have shown that there is a relational component between them. The importance of this is that "the local" and "the global" are not singular, bounded "islands" but are a part of each other.

In relation to this discussion of islands, bridges, and knowledge is the argument to study the particular and to deconstruct boundedness. The dream spaces (and places) I have questioned are "healthy islands," medical plurality, and globalization. These themes were addressed by exploring nissological, anthropological, and post-colonial literature, the WHO "healthy islands" meeting reports, and primary data collected in Chiloé. I have looked at the health of island populations in a post-colonial context, with a focus on the effects of two global assemblages: neoliberalism and colonialism. Secondly, I examined

the space and place of medical plurality on islands and how these practices differ between a localized and institutional approach. This bridging of "islands of medicine" cannot be thought of as either a negative or positive; in some ways it is necessary and unavoidable. The question to consider is this: do bridges bring equality, can they bring Küme Mogen Rüpü? In order for there to be a balanced approach to medical plurality on islands, local health care ontologies have to be respected and health authorities need to realize that biomedical practices are unable to heal all *enfermedades.*

I maintain that intercultural health is needed not just in Chiloé, and not just for indigenous populations, but also for everyone. Biomedicine, while both amazing and necessary, limits the ways we can be healthy, ill or healed. There is an imbalance in the way intercultural health is practiced, as well as an imbalance in the valuing of health systems. It is not just the technologies, such as the use of a particular plant for healing or acupuncture, that need to be integrated but the whole system, the cosmology that goes along with it. If it is just the technologies that are focused on, then it is not a true integration or a parallel running of cosmologies, epistemologies or ontologies. The context of what health *is*, is lost. Therefore, intercultural health should be done in a way that respects the practices and practitioners of indigenous medicine, and as the Williche Council of Chief's suggest, health should be focused on the needs of the individual. As expressed by interviewees, sharing ideas of health are better than imposing them—the concern should not be what healing method one chooses, but that one heals. A change in the approach to health care from using only biomedical technologies to multiple healing options could help alleviate stressors on the current health system.

Appendix A: Letter of Support from the General Council of the Williche Chiefs of Chiloé

KONSEJATU CHAFUN WILLICHE CHILWE
Consejo General de Caciques Williche de Chiloé
Natri Bajo - Comuna de Chonchi– Chiloé – Chile.

CARTA DE APOYO
AL PROYECTO DE DOLORES LE VANGIE

Armando Llaitureo Manquemilla, Cacique Mayor, *en nombre del Consejo General de Caciques Williche de Chiloé, por medio de la presente Carta, viene en dar el apoyo y la bienvenida al retorno de la Srta. Dolores Le Vangie, quien durante el año 2007 se desempeñó como cooperante en nuestra organización, desarrollando actividades de investigación asociada a las algas medicinales con importantes resultados para el conocimiento medicinal indígena.*

El retorno de la Srta. Le Vangie, representa para nuestro Consejo un importante aporte al desarrollo del trabajo de investigación en el Centro Mapu Ñuke y muy especialmente en el programa de Salud Küme Mogen Rüpü, esperando que el nuevo proceso en que se ejecutará el Proyecto de la Srta. Le Vangie, aportará resultados tanto para nuestra organización, así como para el conocimiento de otros ecosistemas similares al nuestro en el campo de la cultura médica indígena tradicional.

Extendida en Natri Bajo, Chiloé, a 16 días del mes de septiembre del año 2009.

English Translation:

Letter of Support for Dolores Le Vangie's Project

Armando Llaitureo Manquemilla, Grand Chief, on behalf of the General Council of the Williche Chiefs of Chiloé, this letter, is to give support and welcome the return of Ms Dolores Le Vangie, who in 2007 worked and cooperated with our organization, developing research activities associated with important medicinal seaweeds that are used for indigenous medicinal knowledge.

The return of Ms Le Vangie, represents to our Council an important contribution to the development of the research at the *Mapu Ñuke* Centre and especially in the health program Küme Mogen Rüpü. We are hoping that the new research that will be developed by the project of Ms Le Vangie, will deliver results for both our organization and to the knowledge of other ecosystems similar to ours in the field of traditional indigenous medicinal culture.

Signed in Natri, Chiloé, the 16th of September, 2009.

References Cited

Adelson, Naomi
2006 'Being Alive Well': Health and the Politics of Cree Well-Being. Toronto: University of Toronto Press.

Anderson, Warwick
2002 Introduction: Postcolonial Technoscience. Theme issue, "Postcolonial Technoscience," Social Studies of Science 32(5–6):643–658.

Baldacchino, Godfrey
2000 The Challenge of Hypothermia: A Six-Proposition Manifesto for Small Island Territories. The Round Table 353:65–79.

———. 2004 The Coming of Age of Island Studies. Tijdschrift voor Economische en Sociale Geografie 95(3):272–283.

———. 2005 Islands—Objects of Representation. Theme issue, "Series B Human Geography," Geografiska Annaler 87B(4):247–252.

———. 2006 Islands, Island Studies, Island Studies Journal. Island Studies Journal 1(1):3–18.

———. 2007 Introducing A World of Islands. *In* A World of Islands. Godfrey Baldacchino, ed. Pp. 1–29. Charlottetown, Prince Edward Island: Institute of Island Studies Press.

Bamford, Sandra
2007 Biology Unmoored: Melanesian Reflections on Life and Biotechnology. Berkeley: University of California Press.

Barrett, Gene, with Mauricio Caniggia and Lorna Read
2002 "There are More Vets than Doctors in Chiloé": Social and Community Impact of the Globalization of Aquaculture in Chile. World Development 30(11):1951–1965.

Barrionuevo, Alexei
2008 Salmon Virus Indicts Chile's Fishing Methods. New York Times, March 27. http://www.nytimes.com/2008/03/27/world/americas/27salmon.html?_r=1&scp=7&sq=chile%20%20salmon&st=nyt, accessed June 17, 2012.

Binns, Colin, with Tomiko Hokama and Wah Yun Low
2010 Island Health: Hope and Challenges for Public Health. Asia-Pacific Journal of Public Health 22(1):19–24.

Brown, Peter J., and Ron Barrett, eds.
2010 Understanding and Applying Medical Anthropology. 2nd edition. Boston: McGraw-Hill.

Brown, Peter J., with Ronald L. Barrett, Mark B. Padilla and Erin P. Finley
2010 Medical Anthropology: An Introduction to the Fields. *In* Brown and Barrett, Understanding and Applying Medical Anthropology, Pp. 3–15.

Brown, Peter J., with Marcia C. Inhorn and Daniel J. Smith
1996 Disease, Ecology, and Human Behavior. *In* Medical Anthropology: Contemporary Theory and Method. Rev. edition. Carolyn F. Sargent and Thomas M. Johnson, eds. Pp.183–218. Westport, CT: Praeger.

Bunting, Helen
2008 Support Grows for Bridge to Chile's Chiloé Island. The Santiago Times, January 15. http://www.santiagotimes.cl/chile/politics/12715-SUPPORT-GROWS-FOR-BRIDGE-TO-CHILE'S-CHILOÉ-ISLAND, accessed February 28, 2013.

Burri, Regula Valérie, and Joseph Dumit
2007 Introduction. *In* Biomedicine as Culture: Instrumental Practices, Technoscientific Knowledge, and New Modes of Life. Regula Valérie Burri and Joseph Dumit, eds. Pp. 1–14. New York: Routledge.

Canadian Oxford Paperback Dictionary
2000 Alex Bisset, ed. Oxford: Oxford University Press.

Capstick, Stuart, with Pauline Norris, Faafetai Sopoaga and Wale Wobata
2009 Relationships between health and culture in Polynesia—A review. Social Science and Medicine 68:1341–1348.

Chappell, David A
1999 The Postcontact Period. *In* The Pacific Islands: Environment and Society. Moshe Rapaport, ed. Pp. 134–143. Honolulu, Hawai'i: The Bess Press, Inc.

Cliff, Andrew, with Peter Haggett and Matthew Smallman-Raynor
2007 Island Epidemiology. *In* A World of Islands. Godfrey Baldacchino, ed. Pp. 267–291. Charlottetown, Prince Edward Island: Institute of Island Studies Press.

Clifford, James
1986a Introduction: Partial Truths. *In* Writing Culture: The Poetics and Politics of Ethnography. James Clifford and George E. Marcus, eds. Pp. 1–26. Berkeley: University of California Press.

———. 1986b On Ethnographic Allegory. *In* Writing Culture: The Poetics and Politics of Ethnography. James Clifford and George E. Marcus, eds. Pp. 98–121. Berkeley: University of California Press.

Comaroff, Jean
1993 Diseased Heart of Africa: Medicine, Colonialism, and the Black Body. *In* Knowledge, Power, and Practice: The Anthropology of Medicine and Everyday Life. Shirley Lindenbaum and Margaret Lock, eds. Pp. 305–325. Berkeley: University of California Press.

Conkling, Phillip
2007 On Islanders and Islandness. Geographical Review 97(2):191–201.

Connell, John
2006 Nauru: The First Failed Pacific State? The Round Table 95(383) 47–63.

Crandon, Libbet
1986 Medical Dialogue and the Political Economy of Medical Pluralism: A Case from Rural Highland Bolivia. American Ethnologist 13(2):463–476.

Deloughrey, Elizabeth
2004 Island Ecologies and Caribbean Literatures. Tijdschrift voor Economische en Social Geografie 95(3):298–310.

Denoon, Donald
1997a New economic Orders: Land, labour and dependency. *In* Denoon et al., The Cambridge History, Pp. 218–252.

———. 1997b Pacific Edens? Myths and Realities of Primitive Affluence. *In* Denoon et al., The Cambridge History, Pp. 80–118.

Denoon, Donald, with Stewart Firth, Jocelyn Linnekin, Malama Meleisea and Karen Nero, eds.
1997 The Cambridge History of the Pacific Islanders. Cambridge: Cambridge University Press.

Diamond, Jared
2005 Collapse: How Societies Choose to Fail or Succeed. New York: Penguin.

Edmond, Rod, and Vanessa Smith
2003 Introduction. *In* Islands in History and Representation. Rod Edmond and Vanessa Smith, eds. Pp. 1–18. London: Routledge.

Egger, Garry
2011 Obesity, Chronic Disease, and Economic Growth: A Case for "Big Picture" Prevention. Advances in Preventive Medicine 2011:1–6.

Esterberg, Kristin G.
2002 Qualitative Methods in Social Research. Boston: McGraw-Hill.

Fabian, Johannes
2002 Time and the Other: How Anthropology Makes Its Objects. New York: Columbia University Press.

Farbotko, Carol
2010 Wishful sinking: Disappearing Islands, Climate Refugees and Cosmopolitan Experimentation. Asia Pacific Viewpoint 51(1):47–60.

Farmer, Paul
2010 Social Inequalities and Emerging Infectious Diseases. *In* Brown and Barrett, Understanding and Applying Medical Anthropology, Pp. 84–92.

Firth, Stewart
1997 Colonial Administration and the Invention of the Native. *In* Denoon et al, The Cambridge History, Pp. 253–288.

———. 2007 Pacific Islands Trade, Labor, and Security in an Era of Globalization. The Contemporary Pacific 19(1):111–134.

Flaskerud, Jacquelyn H.
2009 What do we Need to Know About the Culture-Bound Syndromes? Issues in Mental Health Nursing 30:406–407.

Foster, George M.
2010 Disease Etiologies in Non-Western Medical Systems. *In* Brown and Barrett, Understanding and Applying Medical Anthropology, Pp. 103–110.

Foucault, Michel
1984a The Birth of the Asylum. *In* Rabinow, The Foucault Reader, Pp. 141–167.

———. 1984b Docile Bodies. *In* Rabinow, The Foucault Reader, Pp. 179–187.

———. 1984c The Politics of Health in the Eighteenth Century. *In* Rabinow, The Foucault Reader, Pp. 273–289.

———. 1988 Technologies of the Self. *In* Technologies of the Self. Luther Martin, H. Gutman, and P. H. Hutton, eds. Pp. 16–49. Boston: University of Massachusetts Press.

———. 1991 The Birth of the Clinic: An Archaeology of Medical Perception. London: Routledge.

———. 1995 Discipline and Punish: The Birth of the Prison. New York: Vintage Books.

———. 1990 The History of Sexuality: Volume 1: An Introduction. New York: Vintage Books.

Galea, Gauden, with Brent Powis and Stephen A. Tamplin
2000 Healthy Islands in the Western Pacific—International Settings Development. Health Promotion International 15(2):169–178.

García, Federio, with Mauricio Moraga, Soledad Vera, Hugo Henríquez, Elena Llop, Eugenio Aspillaga, and Francisco Rothhammer
2006 mtDNA Microevolution in Southern Chile's Archipelagos. American Journal of Physical Anthropology 129:473–481.

Good, Byron J.
1977 The Heart of What's the Matter: The Semantics of Illness in Iran. Culture, Medicine and Psychiarty 1:25–58.

Good, Byron J., and Mary-Jo DelVecchio Good
1993 "Learning Medicine": The Constructing of Medical Knowledge at Harvard Medical School. *In* Knowledge, Power and Practice: The Anthropology of Medicine and Everyday Life. Shirley Lindenbaum and Margaret Lock, eds. Pp. 81–107. Berkeley: University of California Press.

Hacking, Ian
2007 Making up People. *In* Beyond the Body Proper: Reading the Anthropology of Material Life. Margaret Lock and Judith Farquhar, eds. Pp. 150–163. Durham: Duke University Press.

Harding, Sandra
2008 Sciences From Below: Feminisms, Postcolonialities, and Modernities. Durham: Duke University Press.

Hau'ofa, Epeli
1993 Our Sea of Islands. *In* A New Oceania: Rediscovering Our Sea of Islands. Eric Waddell, Vijay Naidu, and Epeli Hau'ofa, eds. Pp. 2–16. Suva: University of the South Pacific.

Hay, Pete
2006 A Phenomenology of Islands. Island Studies Journal 1(1):19–42.

Hayden, Cori
2003 When Nature Goes Public: The Making and Unmaking of Bioprospecting in Mexico. Princeton: Princeton University Press.

Indigenous Peoples in Chile
2011 About Indigenous Peoples in Chile. http://indigenousnews.org/indigenous-peoples/chile/, accessed February 18, 2013.

Ingold, Tim
2008 Globes and Spheres: The Topology of Environmentalism. *In* Environmental

Anthropology: A Historical Reader. Michael R. Dove and Carol Carpenter, eds. Pp. 462–469. Oxford: Blackwell Publishing.

International Institute of Reflexology
2013 The History of Reflexology. http://www.reflexology-uk.net/site/about-reflexology/reflexology-history, accessed February 18, 2013.

International Labour Organization
2012a C169 - Indigenous and Tribal Peoples Convention, 1989 (No. 169): Article 25. http://www.ilo.org/dyn/normlex/en/f?p=1000:12100:0::NO::P12100_INSTRUMENT_ID:312314#A25, accessed February 18, 2013.

———. 2012b C169 - Indigenous and Tribal Peoples Convention, 1989 (No. 169): Preamble. http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO:12100:P12100_ILO_CODE:C169, accessed February 18, 2013.

Janes, Craig R, and Kitty K. Corbett
2009 Anthropology and Global Health. Annual Review of Anthropology 38:167–183.

Khambalia, Amina, with Philayrath Phongsavan, Ben J Smith, Kieren Keke, Li Dan, Andrew Fitzhardinge and Adrian E Bauman
2011 Prevalence and Risk Factors of Diabetes and Impaired Fasting Glucose in Nauru. BioMed Central Public Health 11(719):1–10.

Kendall, David
2009 Doomed Island: Nauru's Short-Sightedness and Resulting Decline are an Urgent Warning to the Rest of the Planet. Alternatives Journal 35(1):34–37.

King, Nicholas
2002 Security, Disease, Commerce: Ideologies of Postcolonial Global Health. Theme issue, "Postcolonial Technoscience," Social Studies of Science 32(5–6):763–789.

Kuriyama, Shigehisa
2007 Pulse Diagnosis in the Greek and Chinese Tradition. *In* Beyond the Body Proper: Reading the Anthropology of Material Life. Margaret Lock and Judith Farquhar, eds. Pp. 595–607. Durham: Duke University Press.

Kusenbach, Margarethe
2003 Street Phenomenology: The Go-Along as Ethnographic Research Tool. Ethnography 4:455–485.

Leslie, Charles
1976 Introduction. *In* Asian Medical Systems. Charles Leslie, ed. Pp. 1–12, Berkeley: University of California Press.

LeVangie, Dolores, and Mariana Soto Quenti

2008 Medicinal Seaplants of the Mi'kmaq and Qilliche. Internship Report. Charlottetown, PE: Island Studies Press.

Lewis, Gilbert
1993 Double Standards of Treatment Evaluation. *In* Knowledge, Power and Practice. Shirley Lindenbaum and Margaret Lock, eds. Pp.189–218. Berkeley: University of California Press.

Lewis, Nancy Davis, and Moshe Rapaport
1995 In a Sea of Change: Health Transitions in the Pacific. Health and Place 1(4):211–226.

Lock, Margaret
1980 The Organization and Practice of East Asia Medicine in Japan: Continuity and Change. Social Science and Medicine 14B:245–254.

Lock, Margaret and Vinh-Kim Nguyen
2010 An Anthropology of Biomedicine. West Sussex: Wiley-Blackwell.

Lock, Margaret, and Nancy Scheper-Hughes
1990 A Critical-Interpretive Approach in Medical Anthropology: Rituals and Routines of Discipline and Dissent. *In* Medical Anthropology: Contemporary Theory and Method. Thomas M. Johnson and Carolyn F. Sargent, eds. Pp. 47–72. Westport, CT: Praeger.

Manfredini, Daniele, and Frank Lobbezoo
2009 Role of Psychosocial Factors in the Etiology of Bruxism. Journal of Orofacial Pain 23(2):153–166.

McGee, R. Jon, and Richard L. Warms
2004 Nineteenth-Century Evolutionism. *In* Anthropological Theory: An Introductory History. 3rd edition. R. Jon McGee and Richard L. Warms, eds. Pp. 5–10. Boston: McGraw Hill.

McGrath, Barbara Burns
1999 Swimming from Island to Island: Healing Practice in Tonga. Medical Anthropology Quarterly 13(4):483–505.

Ministerio de Salud
2006 Politica de salud y pueblos indigenas [Health Politics and Indigenous People]. Gobierno de Chile, 10 de Febrero.

Mol, Annemarie
2002 Body Multiple: Ontology in Medical Practice. Durham: Duke University Press.

Niezen, Ronald

2003 The Origins of Indigenism: Human Rights and the Politics of Identity. Berkeley: University of California Press.

Nutbeam, Don
1996 Healthy Islands—A Truly Ecological Model of Health Promotion. Health Promotion International 11(4):263–264.

Ong, Aihwa
2006 Neoliberalism as Exception: Mutations in Citizenship and Sovereignty. Durham: Duke University Press.

Ong, Aihwa, and Stephen J. Collier, eds.
2005 Global Assemblages: Technology, Politics, and Ethics as Anthropological Problems. Oxford: Blackwell Publishing Ltd.

Oseland, Stina, with Håvard Haarstad and Arnt Fløysand
2012 Labor Agency and the Importance of the National Scale: Emergent Aquaculture Unionism in Chile. Political Geography 31(2):94–103.

Pan American Health Organization
2002 Harmonization of Indigenous and Conventional Health System in the Americas: Strategies for Incorporating Indigenous Perspectives, Medicines, and Therapies into Primary Health Care. Report, 24. Washington, D.C.: Division of Health Systems and Services Development.

Péron Françoise
2004 The Contemporary Lure of the Island. Tijdschrift voor Economische en Sociale Geografie 95(3):326–339.

Pitchon, Ana
2011 Sea Hunters or Sea Farmers? Transitions in Chilean Fisheries. Human Organization 70(2):200–209.

Quammen, David
1996 The Song of the Dodo: Island Biogeography in an Age of Extinctions. New York: Scribner.

Rabinow, Paul, ed.
1984 The Foucault Reader. New York: Pantheon Books.

Reid, Robert L.
2006 Chilean Suspension Bridge will be South America's Longest. Civil Engineering 76(4):13–15.

Rhodes, Lorna Amarasingham
1996 Studying Biomedicine as a Cultural System. *In* Medical Anthropology:

Contemporary Theory and Method. Rev. edition. Carolyn F. Sargent and Thomas M. Johnson, eds. Pp. 165–180. Westport, CT: Praeger.

Roberts, Leslie
1991 A Genetic Survey of Vanishing Peoples. Science 252(5013):1614–1617.

Robinson, Molly Meri, and Xiaorui Zhang
2011 The World Medicines Situation 2011: Traditional Medicines: Global Situation, Issues and Challenges. Geneva: WHO Press.

Rohter, Larry
2006 For Some on Island, a Planned Project is a Bridge Too Near. New York Times, August 3, http://travel.nytimes.com/2006/08/03/world/americas/03chile.html?page wanted=all, accessed March 2, 2013.

Ross, Nicola
2010 Biopiracy. Alternatives Journal 36(6):22.

Royle, Stephen A.
1989 Human Geography of Islands. Geography 74(2):106–116.

Rubel, Arthur J.
2010 The Epidemiology of a Folk Illness: Susto in Hispanic America. *In* Brown and Barrett, Understanding and Applying Medical Anthropology, Pp. 235–245.

Sahlins, Marshall
1987 Islands of History. Chicago: Chicago Press.

Said, Edward W.
1979 Orientalism. New York: Vintage Books.

Santos, Ricardo Ventura
2002 Indigenous Peoples, Postcolonial Contexts and Genomic Research in the Late 20th Century: A View from Amazonia (1960 – 2000). Critique of Anthropology 2002 22:81–104.

Sargent, Carolyn F., and Thomas M. Johnson
1996 Introduction. Medical Anthropology: Contemporary Theory and Method. Rev. edition. Carolyn F. Sargent and Thomas M. Johnson, eds. Pp. xi–xxi. Westport, CT: Praeger.

Scheper-Hughes, Nancy and Margaret M. Lock
1987 The Mindful Body: A Prolegomenon to Future Work in Medical Anthropology. Medical Anthropology Quarterly 1(1):6–41.

Shimoji, Akitomo, and Taihei Miyakawa

2000 Culture-bound Syndrome and a Culturally Sensitive Approach: From a viewpoint of Medical Anthropology. Psychiatry and Clinical Neurosciences 54:461–466.

Soja, Edward
1997 History: Geography; Modernity. *In* The Cultural Studies Reader, Simon During, ed. Pp. 135–150. London: Routledge.

Spivak, Gayatri Chakravorty
1998 Cultural Talks in the Hot Peace. *In* Cosmopolitics: Thinking and Feeling Beyond the Nation. Pheng Cheah and Bruce Robbins, eds. Pp. 329–348. Minneapolis: University of Minnesota Press.

Steinberg, Phillip E.
2005 Insularity, Sovereignty and Statehood: The Representation of Islands on Portolan Charts and the Construction of the Territorial State. Them issue, "Series B Human Geography," Geografiska Annaler 87B(4):253–265.

Stephen, Marcus
2011 On Nauru, a Sinking Feeling. The New York Times. July 18. http://www.nytimes.com/2011/07/19/opinion/19stephen.html?_r=0, accessed March 2, 2013.

Stratford, Elaine
2008 Islandness and Struggles Over Development: A Tasmanian case study. Political Geography 27(2):160–175.

Tanner, Jakob
2007 Metaphors of Medicine and the Culture of Healing. *In* Biomedicine as Culture: Instrumental Practices, Technoscientific Knowledge, and New Modes of Life. Regula Valérie Burri and Joseph Dumit, eds. Pp. 35–45. New York: Routledge.

Taylor, Carl
1976 The Place of Indigenous Medical Practitioners in the Modernization of Health Services. *In* Asian Medical Systems. Charles Leslie, ed. Pp. 285–299. Berkeley: University of California Press.

Thomas, Nicholas
1994 Colonialism's Culture: Anthropology, Travel and Government. Princeton, New Jersey: Princeton University Press.

Tsing, Anna
2005 Friction: An Ethnography of Global Connection. Princeton: Princeton University Press.

Tuhiwai Smith, Linda
1999 Decolonizing Methodologies: Research and Indigenous Peoples. London: Zed Books Ltd.

United Nations-economic and social council
2003 Commission on Human Rights: Indigenous Issues. http://www.unhchr.ch/Huridocda/Huridoca.nsf/e06a5300f90fa0238025668700518ca4/333d149685a1f98bc1256e5b0039fb01/$FILE/G0317091.pdf, accessed February 18, 2013.

U.S. Department of Energy Genome Programs
2012 Home: Human Genome Project Information. http://www.ornl.gov/sci/techresources/Human_Genome/home.shtml, accessed February 17, 2013.

Vazques, Abigail, and Irené Novaczek
2010 The Heart of Mother Earth: Youth Engagement with the Sea and Marine Resources on Chiloé Island, Chile. Research Report. Charlottetown, PE: Island Studies Press.

Waldram, James
2000 The Efficacy of Traditional Medicine: Current Theoretical and Methodological Issues. Theme issue, "Ritual Healing in Navajo Society," Medical Anthropology Quarterly 14(4):603–625.

Weller, Susan C., with Roberta D. Baer, Javier Garcia De Alba Garcia, Mark Glazer, Robert Trotter, Lee Pachter and Robert E. Klein.
2002 Regional Variation in Latino Descriptions of Susto. Culture, Medicine and Psychiatry 26:449–472.

Widmer, Alexandra
2010 Native Medical Practitioners, Temporality, and Nascent Biomedical Citizenship in the New Hebrides. Political and Legal Anthropology Review 33(S1):57–80.

Wikipedia
2013 Phosphate mining in Nauru. http://en.wikipedia.org/wiki/Phosphate_mining_in_Nauru, accessed February 17, 2013.

Williams, Patrick, and Laura Chrisman
1994 Introduction. Colonial discourse and post-colonial theory a reader. Patrick Williams and Laura Chrisman, eds. Pp. 1–20. New York: Columbia University Press.

World Health Organization
1995 Yanuca Island Declaration. Report, Meeting of the Ministers of Health for the Pacific Island Countries. Yanuca Island, Fiji. Manila: WHO.

———. 1999 The Palau Action Statement: On Healthy Islands. Report, Meeting of the Ministers of Health for the Pacific Island Countries, Koror, Republic of Palau. Manila: WHO.

———. 2001a Apia Action Plan on Traditional Medicine in the Pacific Island Countries.

Report. Manila: WHO.

———. 2001b Madang Commitment Towards Healthy Islands. Report, Meeting of the Ministers of Health for the Pacific Island Countries. Madang, Papua New Guinea. Manila: WHO.

———. 2003 Tonga Commitment to Promote Healthy Lifestyles and Supportive Environment. Report, Meeting of the Ministers of Health for the Pacific Island Countries, Nuku'alofa, Tonga. Manila: WHO.

———. 2005a National Policy on Traditional Medicine and Regulation of Herbal Medicines: Report of a WHO Global Survey. Geneva: WHO Press.

———. 2005b Samoa Commitment: Achieving Healthy Islands: Conclusions and Recommendations. Report, Meeting of the Ministers of Health for the Pacific Island Countries. Apia, Samoa. Manila: WHO.

———. 2007 Meeting of the Ministers of Health for the Pacific Island Countries. Report. Port Vila, Vanuatu. Manila: WHO.

———. 2009 Eighth Meeting of the Ministers of Health for the Pacific Island Countries. Report. Madang, Papua Guinea. Manila: WHO.

———. 2011a NCD Country Profiles Nauru. http://www.who.int/nmh/countries/nru_en.pdf, accessed February 17, 2013.

———. 2011b NCD Mortality, 2008. http://gamapserver.who.int/gho/interactive_charts/ncd/mortality/total/atlas.html, accessed February 17, 2013.

———. 2012 Mental Health. http://www.who.int/topics/mental_health/en/, accessed October 19, 2012.

———. 2013 About the IHR. http://www.who.int/ihr/about/en/, accessed February 24, 2013.